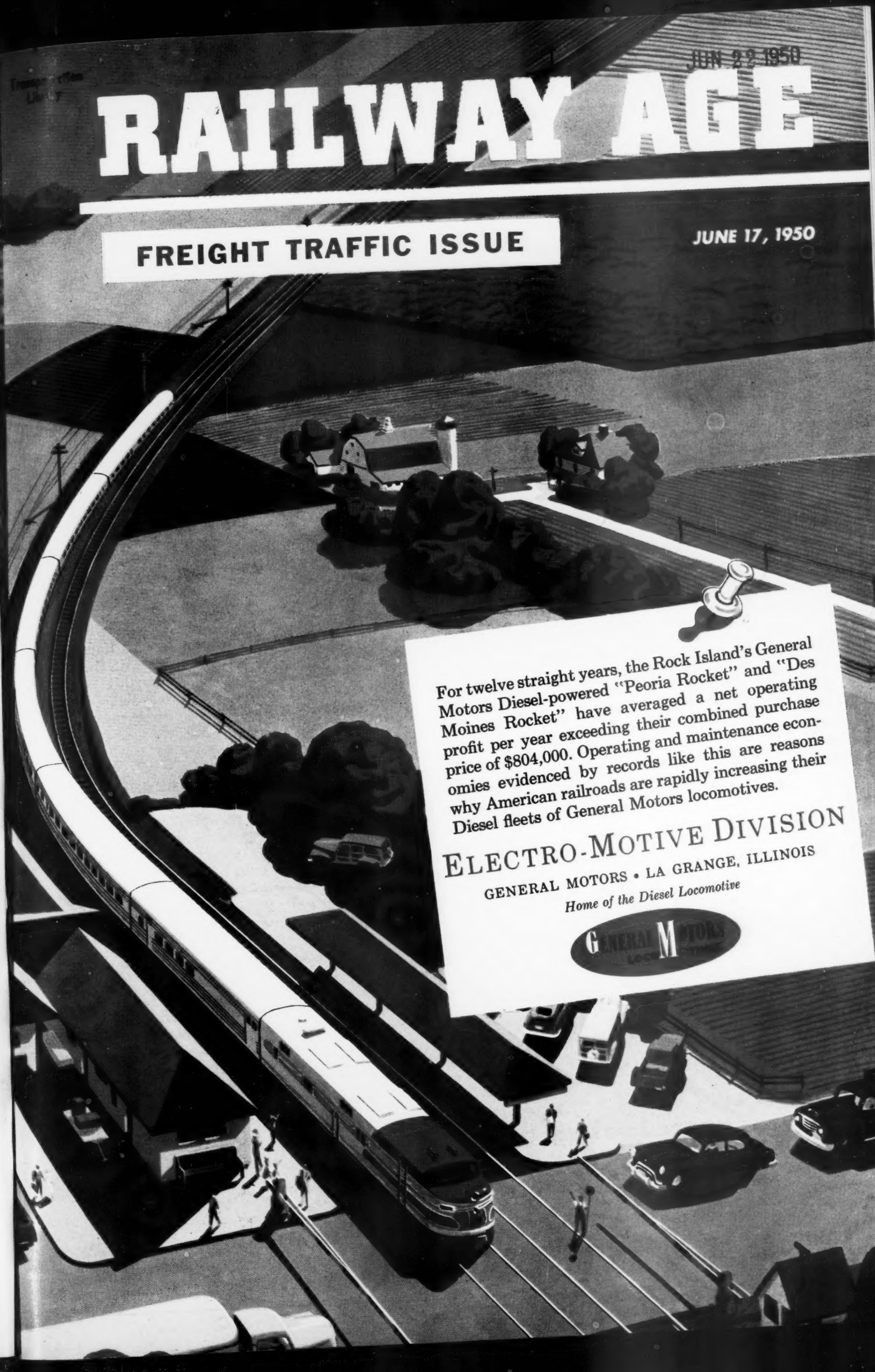
JUN 22 1950

RAILWAY AGE

FREIGHT TRAFFIC ISSUE

JUNE 17, 1950



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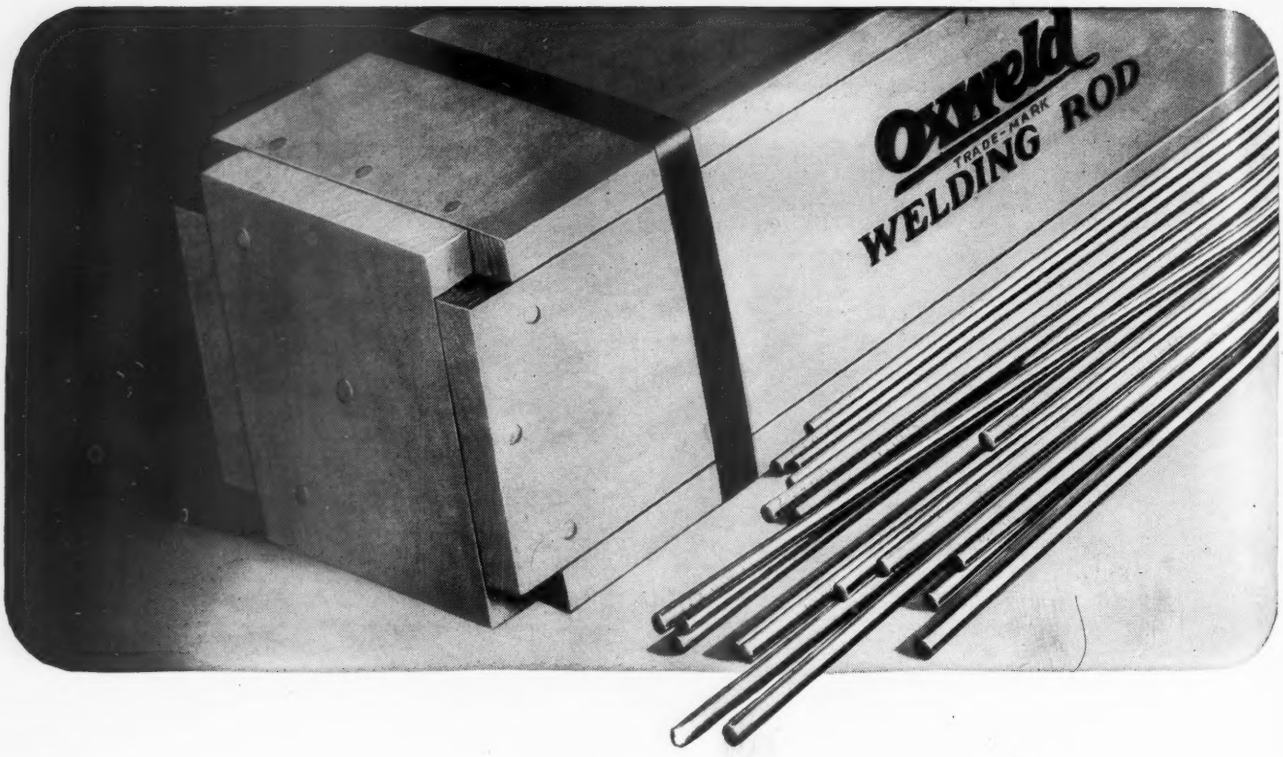

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WEEK AT A GLANCE

LAYING THE GEORGIA GHOST: The bugaboo of "conspiracy" to gyp Dixie with extortionate freight rates—a specter conjured up by sundry politicians and do-gooders such as Ellis Arnall (whatever became of him anyhow?) and Mme. Roosevelt—has been pretty thoroughly exorcised in a report by Special Master Garrison on Georgia's anti-trust complaint against 20 railroads. Our Washington editor, Walter Taft, presents elsewhere in this issue his condensation of this important 923-page report.

SUPERS PONDER PATRONS' NEEDS: The annual meeting of the American Association of Railroad Superintendents, reported elsewhere in this issue, was largely given over to a discussion of ways and means for providing the customers with improved service. The keynote address—by the Lackawanna's President William White—left no doubt in the minds of any of his audience that the attainment of customer satisfaction is the goal, above all others, at which the superintendents must aim.

HILL AND BUFORD TO RETIRE: President J. B. Hill of the Louisville & Nashville will retire on June 30 and will be succeeded by John E. Tilford. The Milwaukee's President C. H. Buford told his directors this week that he plans to relinquish the duties of his present office at the end of August.

"INTERMEDIATE RATES": The advantage—to shippers and railroads—in progressive reductions in l.c.l. rates where quantity rises is explored in the editorial comment section of this issue. The big and heavily loaded car is one of the railroads' principal claims to superior transportation economy—but smaller shipments are, at the same time, a greater economy to the shippers of some commodities. A rate structure to harmonize what may tend to be the incompatible interests of both shipper and carrier seems to be a pretty important objective.

BETTER SERVICE, FREIGHT AGENT'S PLEA: Rate concessions for pallets, tariff simplification, fewer circuitous routings and more effort to avoid loss and damage are among the recommendations of the railroads' freight agents at their meeting last week, which is reported elsewhere in these pages. A. H. Schwietert addressed the agents and gave them some practical pointers on doing a better job for the customers.

PASSENGER SERVICE LOSSES: It is contended editorially herein that the "deficit" of $649 million charged to passenger service by I.C.C. statisticians is misleading—in that this figure does not represent the burden of charges of which freight service would be relieved if passenger service were discontinued. It is, however, conceded that passenger service is not earning nearly as much as it would if (1) mail pay were increased to a compensatory level and (2) the railroads were permitted to discontinue all trains that are plainly unprofitable. Rates on profitable traffic would not have to be so high, if political pressure against compensatory mail rates and the discontinuance of profitless trains were removed.

GYPSUM BOARD ON FLAT CARS: Savings in handling costs to the consignee—thereby luring him away from specifying truck delivery—have led to flat-car movement of gypsum board, where fork-lift trucks can be easily used. The flat cars have built-up ends, like pulp cars, and carry loads up to 100,000 lb. Weather protection, where necessary, is provided by asphalt-treated Kraft paper. Damage to lading is virtually eliminated. Further details on these cars, which cut consignee's unloading costs about 90 per cent, are given elsewhere in these pages.

CONVEYOR AT GALEWOOD TRANSFER: The Milwaukee has put in a truck-tow system at its Galewood freighthouse (Chicago) which operates over a lift bridge and a roll-away bridge to traverse the length of two platforms. The result, as described, herein, is expedited operation, especially at the time of Friday's rush and in clearing up Monday's accumulation.

CANADA'S NEW REEFERS: Ceiling-bunkered refrigerator cars which save the shipper as much as $100 in ice per trip, and permit an increase of 50 per cent in the average carload, are described in an article in this issue. The cars are provided, also, with an outside charcoal heater, which transmits its heat by liquid circulating through interior piping. Distance-reading thermometers, disclosing interior temperature, avoid attention to heating or refrigeration when not required.

THE BRETHREN DISLIKE DONNELL BILL: Senator Donnell's bill—which would make it just as mandatory on the unions as it already is on their employers, to accept emergency board awards—took a shellacking this week from the organized brothers, as is reported in our news pages. The A.F. of L.'s Bill Green foresees an end to the "peaceful, friendly and cooperative relations" existing in the railroads' industrial relations if the Senator's mischievous proposal is accepted.

40-HOURS FOR YARDMEN: Railroad yard employees are entitled to a 40-hour, 5-day week in the opinion of an emergency board which reported to President Truman just as this issue of *Railway Age* was going to press. The hourly wage raise the board recommends, however, will necessitate a little overtime work to provide these employees with the present take-home pay, which they earn in 48 hours. The board has frowned on the demand of passenger trainmen that their "day" be reduced to 5 hours or 100 miles.

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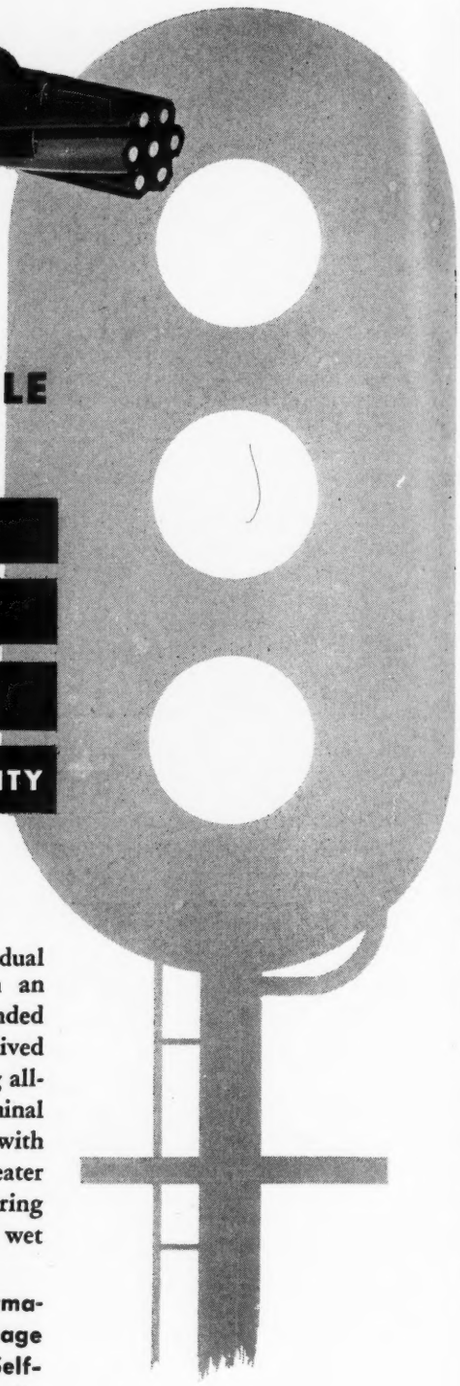

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SHIPPERS AND UNPROFITABLE PASSENGER SERVICE

Complaints are sometimes heard from shippers that railway passenger service is conducted at a loss which has to be met by earnings from freight service. The Interstate Commerce Commission has a formula in accordance with which the railways are required to allocate all railway operating expenses, taxes and equipment and joint facility rentals between freight train service and passenger train service. On the basis of the separation of the total costs arrived at by the use of this formula, and of the revenues derived from freight train service and passenger train service, the commission's statisticians estimate the net operating income or deficit of each of the two types of service.

Their estimates for 1949, which recently were made public, are a net operating *income* of $1,335 million from freight service, and a net operating *deficit* of $649 million from passenger service—leaving a total net operating income of $687 million. Their estimates for the fourteen years 1936-1949, inclusive, indicate a net operating income from freight service in each year ranging from as low as $621 million in 1945 to $1,394 million in 1942, and a net operating income from passenger service in only the four war years, 1942-1945, inclusive.

These statistics raise some important questions. Are the losses from passenger train service as large as estimated? In other words, is the formula used for allocating operating expenses and taxes between freight train service and passenger train service sound? And, if so, what can and should be done to reduce the losses from passenger train service? These are questions that concern shippers, because, after deduction of the loss from passenger train service from the income from freight service, the net operating income left the railways is too small, to enable them adequately to improve and expand their freight service.

The Statistics Are Deceptive

Railway Age repeatedly has questioned the soundness of the commission's formula as a means of arriving at the actual financial results of freight train and passenger train service. These estimates made by I.C.C. statisticians seem to indicate that most railways would make more net operating income if they completely abandoned passenger service. But whether this would be the result on any given railroad would depend solely on whether the abandonment of this passenger service would *reduce total operating expenses more than total operating revenues.* And probably on most railways total operating revenues would be reduced more than total operating expenses, with the result that total net operating income would decline.

Passenger service on all but a few railroads is mainly or purely a by-product, but the commission's

statisticians charge this by-product with its full proportionate share of all joint and overhead expense. No private industry—left to its own good judgment on how to allocate joint and overhead costs—burdens its by-products with joint costs, as the commission's statisticians do the railroads. Furthermore, most of the "deficit" attributed by the commission's statisticians to railroad passenger service comes from the "head-end" traffic—i. e., mail and express. The mail traffic is unprofitable because the commission has allowed the railroads an increase of only 25 per cent in charges for carrying mail—and the express traffic earns as little as it does largely because of the competition of the parcel post, which the government is handling at charges which do not cover the costs. If and when the commission raises railroad rates for carrying the mail to a compensatory level and parcel post charges are increased accordingly, all of the deficit incurred by the railroads in moving "head-end" traffic will disappear.

Why Not Eliminate the Losers?

Many infer from the commission's estimates that the railways lose money on all passenger trains. This is very far from true. There is hardly a railway in the country that is not deriving good net earnings from some or many of its passenger trains. The losses are incurred on the many trains that are poorly patronized. And why do the railways continue to operate them? Not because they desire to, but because the opposition of the labor unions and of the people of local communities, backed by that of state commissions, prevents trains that make losses from being taken off.

If the railways are to continue their needed program of expenditures not only for the improvement and expansion of their freight service but also for the improvement of the service of the passenger trains that can be made to pay, they must earn more net operating income. And they should not be forced to seek the needed increase in net operating income by advances in freight and passenger rates that would not be needed excepting for the unnecessary losses from passenger train service. The pressure from labor unions, the people of local communities and state commissions that compels continuance of so many unprofitable passenger trains is purely political and can be offset only by political pressure from other directions. The railways alone cannot apply enough political pressure. The shippers can, and in their own self-interest should, increase the resistance to the continuance of passenger trains operated solely to provide jobs for employees that are not needed and to provide service for people who will not use it—people who go in their *automobiles* to oppose reductions in *train* service at hearings before state commissions and other public bodies. Whatever the losses from passenger service may actually be, the larger they apparently are the more they increase the pressure for higher freight rates.

Shippers might also consider the desirability of adding their voices to those of the railroads in pressing for early action by the commission in raising railroad charges for handling mail to a compensatory level and in supporting increased charges for handling parcel post to reflect total costs of the service, thus preventing this socialized transportation service from competing unfairly with the privately owned and operated express business.

RATES FOR A "TWILIGHT ZONE"

Right now the railroads in Official territory are taking a good look at a proposal by one of them that there be established for a wide range of commodities quantity ratings for less-carload and any-quantity shipments, as noted in the past two issues of *Railway Age*. Under this plan there would be established successively lower ratings for each of four minimum weight categories—namely 5,000, 10,000, 15,000 and 20,000 lb. Presumably, the new ratings would be applied as exceptions to the existing classification, with broad application to most commodities now moving in merchandise service, with the exception of explosives, livestock, perishables, certain contaminating articles and a few other specially bulky commodities. To illustrate: An item which now takes column 70 less-carload, and column 40 carload (minimum 30,000 lb. or over), would, under the proposal, take column 57½ for a minimum of 5,000 lb., column 57 for 10,000 lb.; column 55 for 15,000 lb. and column 52½ for 20,000 lb. or more. If the actual charges for any shipment, by applying the rating for the minimum shipment in next higher weight category, be lower than application of the rating applicable to its actual weight, the former would apply.

The purpose of the proposal is twofold: (1) to enable the railroads to meet the competition resulting from quantity rates of the motor carriers, and (2) to provide an incentive for heavier merchandise tenderings by graduating rates downward as minimum loads increase.

The "In Between" Stuff

The railroads' rate structure contains a "twilight zone"—a dead spot—which is becoming an increasing handicap to them. This zone of maximum weakness lies between the weight category of the less-carload shipments actually moving on the rails and that of the full carload.

The basic physical unit in railroading is a car. Any shipment which is so small as not to justify use of a car for itself, and must, therefore, be handled in conjunction with other less-than-carload lots, produces a higher unit cost and bears, therefore, a higher

charge. The classic spread between l.c.l. and c.l. rates in the East used to be described as "two classes wide." In the old days, commerce simply adapted itself to this condition.

Along came the trucker, with his smaller physical unit of doing business. He created, in effect, a new product—the truckload shipment. He went even further in some instances. He established quantity ratings graduated between the highest for the smallest shipments—some of which he'd just as soon the railroads handle anyhow—and the truckload rate. The combination hit the railroads in the solar plexus. Furthermore, events outside transportation conspired to worsen the blow. Business got the notion that, the smaller the inventory, the more competent the management. It appears that the trend is now stronger than ever; likely the future will bring even greater pressure to bear against the integrity of the traditional carload shipment for many non-bulk commodities.

There is to be considered, of course, the growing and welcome practice among the largest shippers of pooling shipments in carload quantities in connection with a system of distribution warehouses, and the service of the forwarders. But there remains outside the influence of the pool car an immense and growing proportion of commerce which does not get into the carload category and which will not pay present l.c.l. rates. This is now the trucker's domain and his home-grown product.

Like any business, the railroads have two alternatives. They can decide that they can't possibly make and sell this product at a profit. Or, they can decide to meet the competition. The worst side of this commercial trend is not the loss to the trucker of the most desirable l.c.l. traffic. The real tragedy for the railroads is the continuing breakdown of the profitable carload shipment into, say, 5,000 to 20,000 lb. consignments, to which trucking and truck rates generally lend themselves admirably.

There is nothing novel in attempts by the railroads to attack the problem of their "twilight zone." Lower carload minimum weights, with or without a graduation of rates based on weight minimums, have been one answer over the years. As a random illustration, a classification listing for pails (item 13790) provides a column 55 rating for a carload minimum of 14,000 lb.; column 50 for 20,000 lb. and column 40 for 30,000 lb.

Economy in Heavy Loading

But a freight car is still a freight car, and no amount of rate juggling will overcome the fact that it is wasteful to haul a half-empty car. The large-capacity American box car is a big reason why our freight rates are, compared with the rest of the world, exceedingly low, and why United States railroads move more ton-miles per capita than the carriers of any other nation. Yet the industry is faced with the hard fact that commerce in a large number of high-value and high-rated commodities is tending to shift away from the box car as a unit of shipment.

Demountable Containers

Back in 1921 there were introduced demountable containers loaded on flat cars, which cut costs of platform handling of the larger l.c.l. shipments for which they were designed and, in connection with special quantity rates—lower than existing merchandise levels—constituted a successful means for handling goods in the "twilight zone." Container handling of merchandise never expanded to the point originally contemplated for many reasons—some of them obscure. Two important reasons were: (1) the necessity for expensive equipment for transferring the containers between cars and between cars and trucks, and (2) the reluctance of the Interstate Commerce Commission to allow truly "intermediate" rates, reflecting the economy of the container.

Today the question is as fresh and vexing as ever. Those who oppose "incentive" quantity ratings for l.c.l. warn that the railroads would "lose their shirt" under them, because they would accord charges less than those now applicable to less-carload traffic—considered non-compensatory by many roads—to traffic to which, at the same time, they would either have to (1) give the same expensive platform handling, loading and transfers accorded to smaller shipments or (2) haul in half-empty cars.

In answer, proponents of quantity ratings contend that, as a general rule, the larger merchandise shipments can be handled at lower unit cost than the smaller—even with traditional station handling. Actually, they declare, many movements will be made to or from transfers in ferry cars at considerable savings, or in through cars from shipper's dock to receiver's dock where volume justifies. They point to the fact that a large proportion of merchandise cars already move with scandalously light loads. Other proponents see in increased volume the best way to bring down high station and transfer costs.

The proposal for quantity ratings for merchandise now before the eastern roads has the value of being specific and of wide application. It is possible that it will be subjected to many changes. But the direction is good. The twilight zone in railroad rates is to be explored in earnest. To a questionnaire circulated among important shippers by a committee of railroad traffic officers shortly after the close of the war, 56 per cent of the replies suggested the publication of less-carload volume weight rates. To a similar survey among railroad officers and employees dealing with traffic matters, even a greater majority advocated experiments along this line. Almost half of the railroaders said that strict interdependency between carload and l.c.l. rates handicapped the railroads

Anent the new Official territory proposal, three experienced railroad traffic solicitors told this writer, in unison: "Boy, would it give us something new and wonderful to take out and sell on the street!"

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An all-steel refrigerator car showing the underslung heater. The car is one of a group of 300 50-ton cars turned out by the Canadian National Transcona shops during 1948 and 1949

Canadian Railways' Refrigerator Cars

Nearly 3,000 cars, built in 11 years with overhead ice bunkers, carry heavier loads and use less ice—Underslung heaters now being applied

By A. N. CAMPBELL
Assistant vice-president,
International Equipment Company

Few of us realize that 75 per cent of all the food we consume today is perishable. New York City could not subsist for more than ten days without cold-storage products. Frozen foods are now staples and more than 1,200 varieties have been put up in this way—everything from Chinese egg rolls to fresh cocoanut milk. It is claimed that this method of preservation will keep foods for centuries, as evidenced by the fact that the flesh of huge prehistoric monsters found frozen in Alaska and Siberia was discovered to be quite edible, centuries after the beasts died.

In addition to foodstuffs subject to deterioration in temperatures unsuited to their preservation, all sorts of other products must be transported under controlled temperature conditions. Valuable plant bulbs, blood plasma, flowers, live lobsters, beer, wine and canned goods must be protected as they are moved about the country. Rubber and ordinary honey bees—live bees—have been handled in refrigerator cars and the same cars have been used to ship such things as ball bearings to prevent moisture condensing on them, damaging the fine finish.

The demand for safe distribution of these commodities all over the continent has prompted the development of a railway car which will cool, keep and carry them. These cars must be capable of maintaining certain products at temperatures around zero on the hottest summer day, while other commodities must be kept at a temperature above 32 deg. when the Canadian winter reaches 45 to 60 below zero. Each commodity has a temperature at which it carries best—bananas at 60 deg.; apples at 32 deg.; bacon at 30 deg.; and frozen foods at zero.

In Canada, all of the refrigerator cars are owned and operated by the railroads. In the 1930's farsighted Canadian car designers took a different approach to the shortcomings of the end-bunker refrigerator car. They chose to modernize their present ownership of the end bunker refrigerators and to keep them up-to-date with latest designs of this car in the United States, but to build new cars along entirely different lines.

They found this to be a difficult task. In the first place, an average of 20,000 freight cars belonging to United States railways operate over Canadian lines every day, while a like number of Canadian cars are operated on some or all of the 540-odd line-haul railroads in the United States from coast to coast and from the Gulf to the border.

The designer of the refrigerator car must adhere to

This article is adapted from a paper presented before the Toronto Railway Club of April 24.

all of the mandatory rules and requirements of the Association of American Railroads and various laws of the United States and Canada. For example, no car of untried type can be offered in interchange until its size, capacity, and design have been approved by the Transportation and Mechanical Divisions of the A.A.R. In contemplating redesigning their refrigerator cars completely, Canadian railroad engineers had no alternative but to start out with A.A.R. standards. They used the latest types of trucks, draft gears and other running gear, all strictly in accordance with the requirements of the A.A.R. Upon these trucks they built a steel underframe and superstructure meeting all A.A.R. strength requirements, actually following closely the A.A.R. standard design of steel-sheathed box car which has proved itself capable of withstanding 15 years or more of the most rigorous railway service.

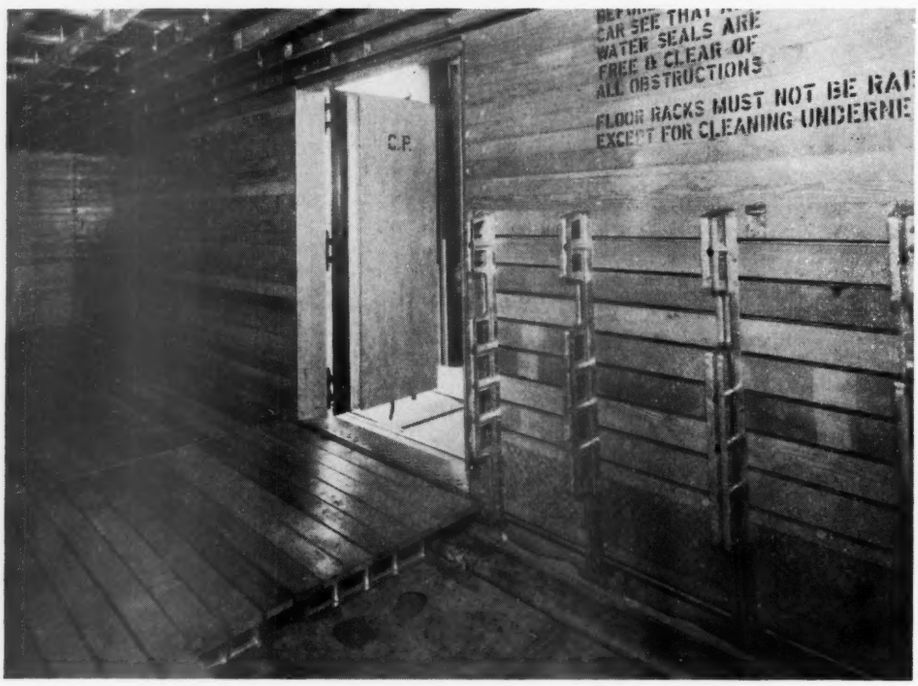
Insulation

Inside the outer steel sheathing an additional steel shell is built, completely insulated from the outside frame by four to five inches of the best insulation obtainable. Very careful planning was necessary to avoid any metal-to-metal contact between the inside and outside metal shells. It is calculated that one bolt passing from the inside to the outside of a refrigerator car can cause a heat loss of from three to four B.t.u. per hour. In the old end-bunker cars, heat loss in this manner was calculated at 27 B.t.u. per hour, or about 20 per cent of the total heat leak through the walls, floor and roof of a car. About 28 per cent of the area of the side walls of a wood-sheathed end-bunker car was not properly insulated due to framing members occupying space which should have contained efficient insulation. Wood has more than four times the conductivity of good insulation. Therefore, the difference in heat loss between the modern Canadian refrigerator car and the old end-bunker car is considerable, explaining, in part, record savings in ice established with the new design of car. Moisture in the insulation has much to do with insulating value, hence the outside steel shell is sealed with riveted or welded joints, while the inside steel shell has welded joints which are flooded with asphalt as an additional vapor barrier.

Overhead Bunkers

Canadian engineers benefited from the experiences of a sister member in the British Commonwealth of Nations and based their design on that of cars built and operated by the South African Railways and Harbours Board. Under the insulation in the roof of the car shallow ice tanks, eight in number, are mounted so that they can be filled with ice from the roof of the car. These tanks retain a reservoir of cold brine in them even after all the ice load has melted. They hold about 7,000 lb. of ice and salt when filled and, with a 30 per cent to 70 per cent mixture, the temperature of the melting ice is 6 deg. below zero.

Below the ice tanks are plywood drain pans which collect any condensation which may form on the surface of the cold tanks. The drain pans nested closely together form the ceiling of the car. The side walls are composed of shallow flues covered with plywood inside lining. The floors are metal, welded at the joints so that no moisture can get down into the underframe or insulation. Floors are specially sloped and formed to clear moisture from the cars. Floor racks are designed to allow free air circulation under the load



Interior of a Canadian Pacific refrigerator car. The radiator pipe is shown under the raised section of the floor rack

transversely, longitudinally and vertically through openings in the racks.

Under the drain pans in the ceiling of the car there are meat racks. The Canadian car is an all-purpose type designed to carry any perishable commodity ordinarily shipped by rail.

Underslung Heaters

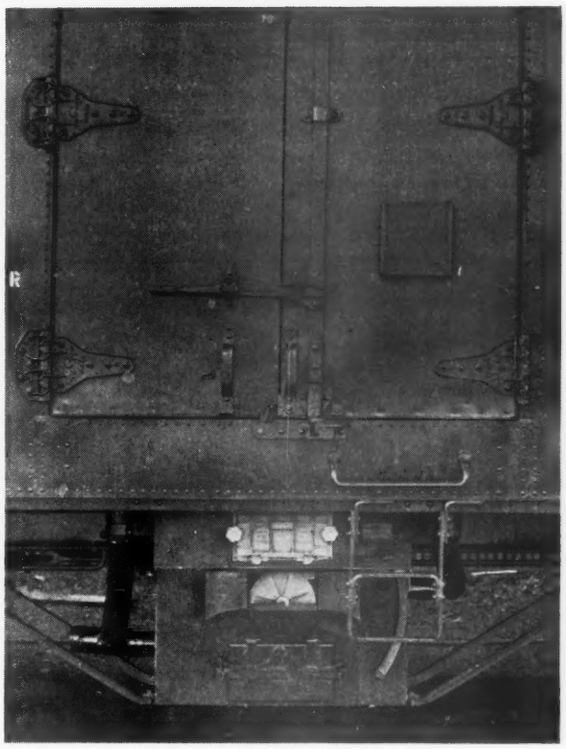
New Canadian cars are equipped with an underslung charcoal heater carried under the car where it can be quickly examined and serviced from the ground. This type of heater was developed about fourteen years ago by the Canadian railways with the cooperation of the National Research Council. The device is much similar in principle to the portable charcoal heater, but is larger and more reliable. It has a firepot with an adjustable draft control, fed automatically from a magazine above holding 50 to 60 lb. of charcoal. Copper coils in the heater connect to heater coils under the floor racks through which anti-freeze heated in the firepot circulates throughout the car. Air, heated by the coils, rises through the load, evenly heating it by natural convection. Anti-freeze is used so that the liquid in the pipes will not freeze when the car is under refrigeration, or when it is traveling empty with no fire in the heater at Canadian winter temperatures.

With the underslung heater, the differences in temperature of lading at various locations is rarely more than a few degrees and no poisonous carbon monoxide gas is liberated in the car to damage fresh meats or inconvenience men working with the cars. Tests are now being made in Canada with a thermostatically controlled heater. Canadian railroads are proceeding cautiously; they must be sure that a device is absolutely reliable under the most unfavorable conditions which may be encountered before adopting it.

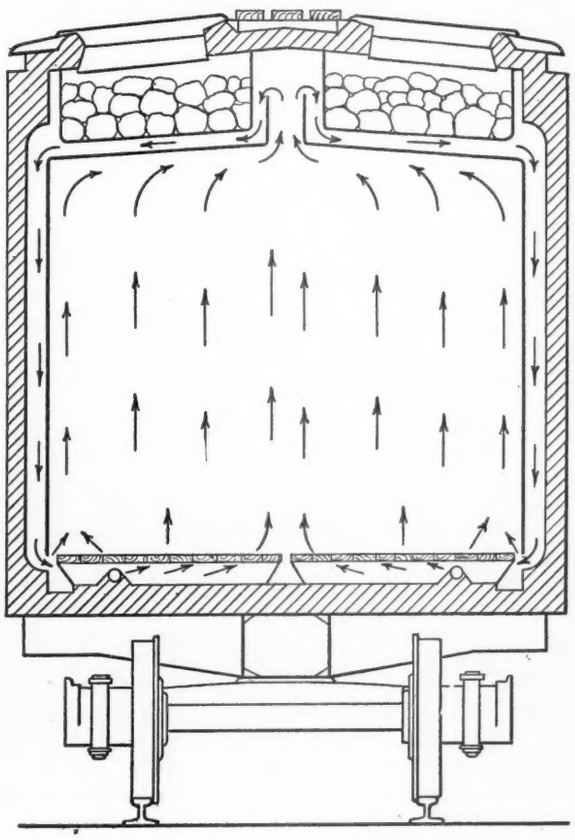
Distance-Reading Thermometer

A distance-reading thermometer, located in the outside sheathing of Canadian refrigerator cars, indicates at a glance what temperature exists inside the car at the top and bottom of the load. This device is so designed that it is completely unaffected by outside temperatures or by temperatures which exist between the dials on the outside of the car and the location where the temperature determination is desired.

When cars are not equipped with distance-reading thermometers, it is a custom to light the heaters when the outside temperature goes down to a specified level. This is the only way protection for the load against freezing can be provided. Since the installation is not the same in all cars, heaters are sometimes lighted when they are not required and overheating damage results. When cars are equipped with thermometers which indicate temperatures of the load without opening the doors, arrangements can be made to light the heaters only when the load requires it. Conversely, readings of the thermometer on the side of the car indicate when reicing of the load is necessary in summer. Often the temperature inside a car is such that icing at some regularly scheduled icing station can be avoided. Without the thermometers, however, it is the custom to reice cars without regard for the immediate requirements of the lading when the outside temper-



The outside charcoal heater under a Canadian Pacific refrigerator car. Heat is transmitted by liquid circulating through interior radiator pipes



The air-circulation circuit in the overhead-bunker refrigerator car

ature at the time indicates that certain refrigeration protection is necessary. By the use of the distance-reading thermometers, a great deal of guesswork is eliminated.

Further Refinements

Since the original Canadian designs of overhead refrigerator cars were adopted, refinements have been added from year to year as experience and tests proved their worth. The drain traps on one type of Canadian overhead car are located midway between the center and the ends of the car to keep the drainage away from the trucks and running gear, avoiding, in part at least, some of the corrosion of these parts which results from their exposure to brine drippings in the ordinary type of car. Sliding doors, first applied for test several years ago, have now been improved and are being installed on additional cars for further tests. Still other refinements are now being studied. Canadian railroads in the past eleven years have placed in service nearly 3,000 units of the Canadian overhead type refrigerator car. They have invested over $35 million in them. Now let us see what they obtained for their initiative, ingenuity and investment.

The "Proof of the Pudding"

With the end-bunker cars, about 7 ft. of longitudinal floor space—over 300 cu. ft. of the interior—is taken up by the ice bunkers and, owing to the necessity for allowing space at the sides, at the center and over the load for air circulation, only a part load of perishables can be handled. In the overhead-iced car every cubic inch of loading space can be utilized. Prior to the war the average load carried in an end-bunker car was about 35,000 lb. The overhead-iced car is often loaded to over 90,000 lb. and the load limit is over 100,000 lb. In addition, it requires considerably less ice which, of course, is dead weight on which the railway gains no revenue and for which the shipper pays.

In the end-bunker car perishables cannot be loaded higher than the top of the bunker bulkhead, otherwise the flow of air is stopped and the load could not be cooled properly. Seven hundred fifty to 800 boxes of apples are carried in an end-bunker car, while the overhead car carries 1,152 boxes. The end bunker carries 550 crates of oranges, while the overhead car carries 840 crates. As against 660 egg crates in the end bunker, the overhead iced car carries 900 crates.

In addition to freight charges, the railway patron—the shipper of a perishable commodity—must bear the cost of icing and heating. Refrigeration is usually charged for according to the number of tons of ice and pounds of salt used. A large precooled or frozen load costs no more to refrigerate than a small load. The overhead-iced car requires less ice than the end-bunker car and it is common for transcontinental loads in overhead-iced, thermometer-equipped cars originating at Prince Rupert to require only one to three reicings en route, against seven reicings at regular icing stations 24 hours apart for an end-bunker car with a smaller load. Ice economies for the railway shipper may exceed $100 per trip.

Along with these economies both to the shipper and the railway, the overhead-iced car does an all-around better job whether the commodity requires heating, ventilation or refrigeration. The air around the tanks in the ceiling of the car is cooled and falls down through the flues behind the lining in the walls of the car. It is liberated under the floor racks and, as it picks up heat from the load, it goes straight up to the ceiling ice tanks where it is cooled again. The air needs to travel only about 25 ft. regardless of the length of the car, as against air travel of about 47 ft. in an end-bunker car.

Problems Yet Unsolved

In spite of this record, the Canadian railways are not resting on their laurels; they are watching every development. They would like to reduce the cost of building and maintaining their cars with their 500-odd different parts. They would like to be able to hold temperatures still lower at reasonable cost. They would like to be able to reduce their investment of millions of dollars in ice each year.

Canadian railroads actually use about 200,000 tons of ice each year for refrigerator cars. They buy about 300,000 tons (about 10,000 carloads) at a cost of over $2,000,000, as one third shrinks away before it is used. Ice is harder to obtain every year. Canada, the land of ice and snow, has found it necessary to import thousands of dollars worth of ice.

Ice alone will not produce temperatures lower than 32 deg. F. in the coldest part of the car. Ten pounds of salt added to 100 lb. of ice will produce a temperature of 21 deg. above zero. Thirty pounds of salt with 100 lb. of ice will produce a temperature of 6 deg. below zero. The temperature in the car is, of course, somewhat higher than that of the refrigerant and the addition of a quantity of salt to ice, particularly, in an end-bunker car, is not a reliable indication of the temperature which will be obtained, as the salt rattles down through the ice to the bottom of the bunker. Residue from impurities in the ice, which runs as high as 10 per cent, forms a stone-like deposit in the drain pans and tanks of refrigerator cars. The salt further provides a problem in that it quickly corrodes car parts and causes considerable damage to tracks and bridges as it escapes in solution from the drains of the car.

Disadvantages of Water-Ice and Salt

As much as 2,600 lb. of brine may drain from one refrigerator car in 24 hours. Brine drippings cause thousands of dollars worth of damage to tracks, bridges, and car parts every year. The report of the federal coordinator of transport published in 1935 estimated damage to tracks and bridges in the United States from this cause may amount to $420,000 per year. One Canadian railroad has tested out hundreds of types of paint in the hope of finding an inexpensive miracle product which will resist brine corrosion without greatly increasing the cost of the cars.

Canadian railroads have experimented with the use of dry ice which costs many times as much as water ice, but is about twice as efficient. Solid carbon dioxide melts at 109 deg. F. below zero and is, therefore, difficult to transport and store. This type of refrigerant avoids difficulties with brine and reduces the dead

The sliding door now in use on some Canadian National refrigerator cars. Installed at the Transcona shops and put in service in May, 1950

weight of ice transported about the country. However, the gas liberated from dry ice has a bad effect on the flavor of certain perishables and a discoloring effect on certain meats.

Canadian railroads have experimented further and find that they can obtain temperatures as low as 15 deg. F. below zero in their overhead cars with salts other than the sodium chloride (table salt) commonly used. The cost is considerably higher, however, and delays for reicing increase correspondingly.

Mechanical Refrigeration

As in Canada, United States refrigerator car owners are experimenting with methods of refrigerating cars without using ice and salt. An ammonia absorption system was installed in a few cars several years ago. Ammonia carried under the car is expanded in coils inside, then absorbed by a tank of water. Special supplies and equipment for recovering the ammonia are required and further installations were not considered practical.

About 20 years ago 80 cars were placed in service equipped with a refrigeration system which depended upon the adsorption of the refrigerant by silica gel reactivated by a propane gas flame. Some of these cars were tried out in Canada. They were demonstrated as incapable of providing uniform temperatures much lower than 20 deg. F. and, therefore, were considered to be no better tha ordinary refrigerator cars.

British Columbia packers are at the present time pleading for uniform zero refrigeration which even the overhead iced car cannot provide. The Canadian Department of Fisheries is interested and, as a result, a Canadian railroad car has been fitted up with a mechanical refrigeration system powered by two gasoline motors. This device, as far as railway operation is concerned, is still in the test stage. Its future is obscure, because the A.A.R. rules of interchange prohibit the free movement of cars equipped with machines using such fuels as gasoline, and it is doubtful if railroad insurance companies will accept the risk of operating freight cars so equipped.

Freedom of movement of railway cars equipped with machines using Diesel fuel is not affected by the A.A.R. rules. Recently a suitable Diesel engine has been developed in the United States and two cars have been fitted up with Diesel-powered mechanical refrigeration. These cars have been used successfully to transport frozen orange juice concentrate from Florida to New York and Boston. In tests, the cars were loaded at 8 deg. below zero in 75-deg. weather, proceeded to destination and maintained the same temperature at unloading. The United States car line operating these two test cars has now ordered ten more to be put in service this year.

It is obvious that, in the future, there will be new developments in the handling of perishable railway traffic so vital to the life and development of the nation and its resources. Thousands of cars are involved, however, and every new development which is adopted must show a profit—in reduced building costs; in reduced maintenance of cars, tracks, bridges or other facilities; in traffic held; in traffic gained; or in better service to railway patrons. When a device or design is proved to possess one or more of these advantages, I am confident that Canadian railways will be among the first to adopt it.

SHIPPER, CARRIER AND CONSIGNEE GAIN WITH HEAVY-LOADING FLATS

Shipping gypsum board and lath on special flat cars doubles per-mile earnings and cuts unloading costs for receivers—Trucking advantages eliminated

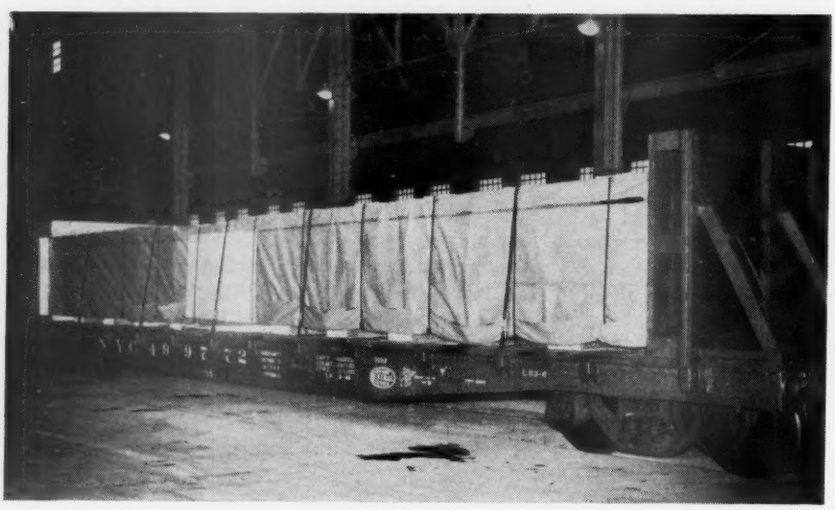
How the adaption of ordinary flat cars to the special needs of the movement of gypsum products has been responsible for the return of important traffic to the railroads can be illustrated by a recent experience with the builders of the mammoth Leavittown housing project on Long Island, N. Y. Originally, great quantities of gypsum building materials moved to the project on flat-bed motor trucks; it was faster and cheaper for the builders to unload shipments received that way. Then to enable the builder to adapt speedy, fork-lift unloading methods to rail shipments, a standard 53-ft. railroad flat car with built-up ends—like those on pulpwood cars—was put into this service, carrying loads up to 100,000 lb. The consignee found many advantages in receipt of shipments on flat cars. More of these cars were put into service, with the result that a substantial portion of the project's total gypsum board requirements are now moving by rail.

The use of specially equipped flat cars to expedite and reduce the cost of unloading gypsum products goes back to 1947, when the United States Gypsum Company and the Illinois Central made an experimental shipment of board and lath loaded on a pulpwood car, using grain doors to cover the recessed center. This initial open-top loading moved from Fort Dodge, Iowa, to Minneapolis, Minn., without mishap, and piloted the construction of five flat cars with permanent upright ends. In the three years intervening, nearly 200 cars on half a dozen railroads have been similarly equipped and placed in service.

The general shake-up of shipping practices brought about by World War II is indirectly responsible for the new type equipment. Heavy-loading orders of the Office of Defense Transportation, initially accepted with reluctance by the gypsum shippers, proved to them, as manufacturers, the economy of *volume* rail shipments. Costs of billing and accounting declined and the quantity of paper work was cut as the size of average consignments increased. But at the same time, retailers, forced to take truck shipments because of box car shortages, found that shipments received on flat-bed highway vehicles cut their unloading costs drastically—so much that in one case, after box cars became available, one important retailer continued to specify shipments by truck—despite a $1.60 rate differential in *favor* of rail movement. So a situation developed in which the producers wanted to ship by rail and perpetuate large lot shipping, while consignees wanted to receive by truck and minimize unloading costs, which had come to represent a greater proportion of the total price of the product than ever before.

Lath Serves as Pallets

Under the most recent procedure for railroad movement, gypsum board is loaded flat, separated at intervals by lath, placed crosswise in order to leave openings for the prongs of the fork-lift trucks to slide under the lading. These open spaces serve the same purpose as pallets, but since the lath is usually part



A load of 90,000 lb. of gypsum board shipped from Oakfield, N.Y., to the Newark (N.J.) warehouse of the United States Gypsum Company arrived in perfect condition, despite a 50-m.p.h. gale encountered en route. After cutting the steel bands and stripping the protective paper, the board is quickly unloaded with fork-lift trucks

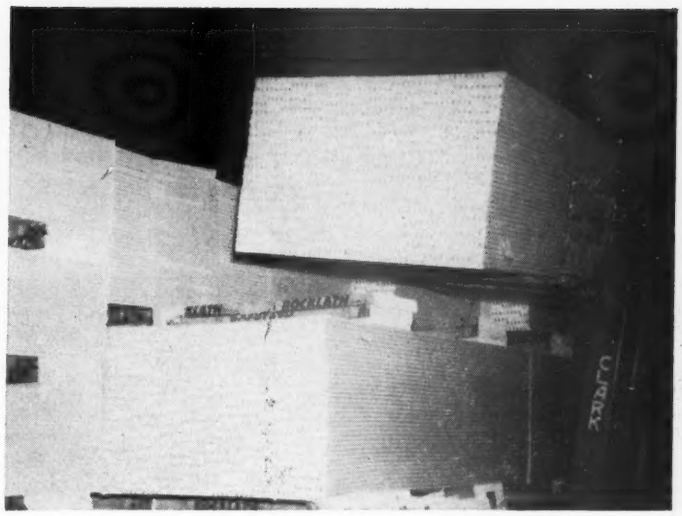
of the shipment, nothing has to be returned or disposed of. Where climatic conditions call for protection from weather, the entire lading is covered with two-ply Kraft paper with an asphalt core. The load is secured to the car by steel strapping stretched over the load from stake pocket to stake pocket.

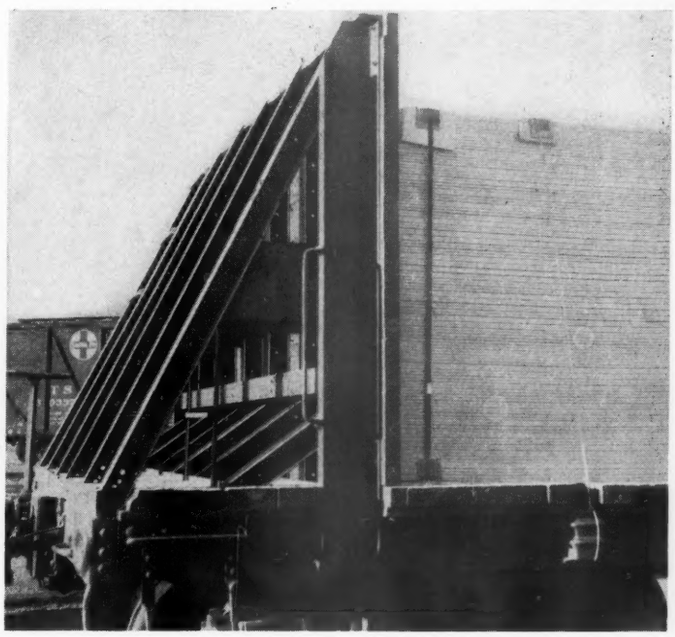
Because this is a relatively new procedure at most shipping points, manufacturers have not yet been able to realize actual loading cost savings. Experience thus far has shown that some economies can accrue to the shipper, although the most important savings are realized by the consignee.

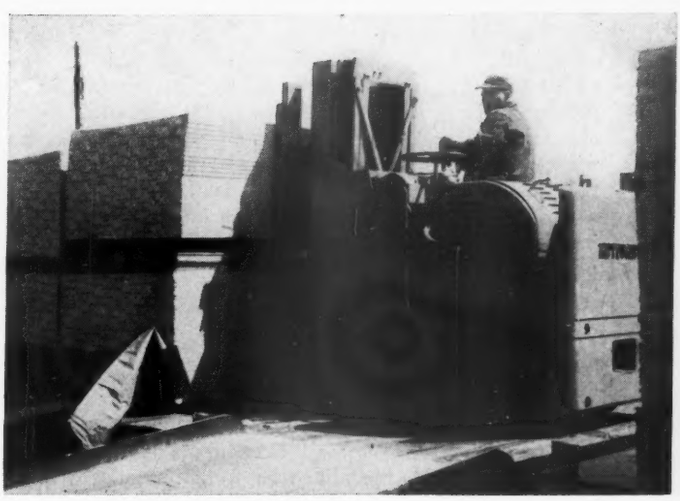
In comparisons of box car and flat car shipments, respectively, between Oakfield, N. Y., and Newark, N. J., unloading costs were found to be ten to one in favor of flat car shipments. A box car shipment containing 38,000 sq.ft. of gypsum board took eight hours to unload, using two men in the car, one at the door, and two on the platform. The cost was 80 cents a thousand square feet. In contrast, a flat car shipment containing 55,000 sq. ft. took two hours to unload using one fork-lift truck and operator. The cost was eight cents a thousand square feet.

Gypsum board moving between Oakfield and Newark carries a rate of 48 cents a hundred, with a carload minimum of 40,000 lb. Box car shipments were loading to about 43,000 lb., earning an average of $206. Shipments on flat cars equipped with ends, on the other hand, have averaged about 90,000 lb., earning approximately $432. Some flat car shipments load up to 110,000 lb. While the special flat cars can be used for many ordinary loads of other commodities, their return is usually made empty to keep the equipment in the heavy-loading gypsum trade for which they were designed, and in which service they have more than doubled the loaded car-mile earnings.

The average unloading time for a flat car containing 40,000 sq. ft. of board—90,000 lb.—is estimated to be about 30 min. In some cases, where the consignee is ready to unload, the car can be released and pulled empty before the switch engine which set it out leaves the district. Consignees find, too, that board shipped on flat cars is received in excellent condition. It is reported that U. S. Gypsum, one of the largest gypsum shippers, has not filed a single claim for damaged Sheetrock or Rocklath shipped on flat cars since they inaugurated the practice three years ago. Nor, in that three-year period, has there been a single case of side-shifting sufficient to suggest any hazard in the open-top method of shipping.







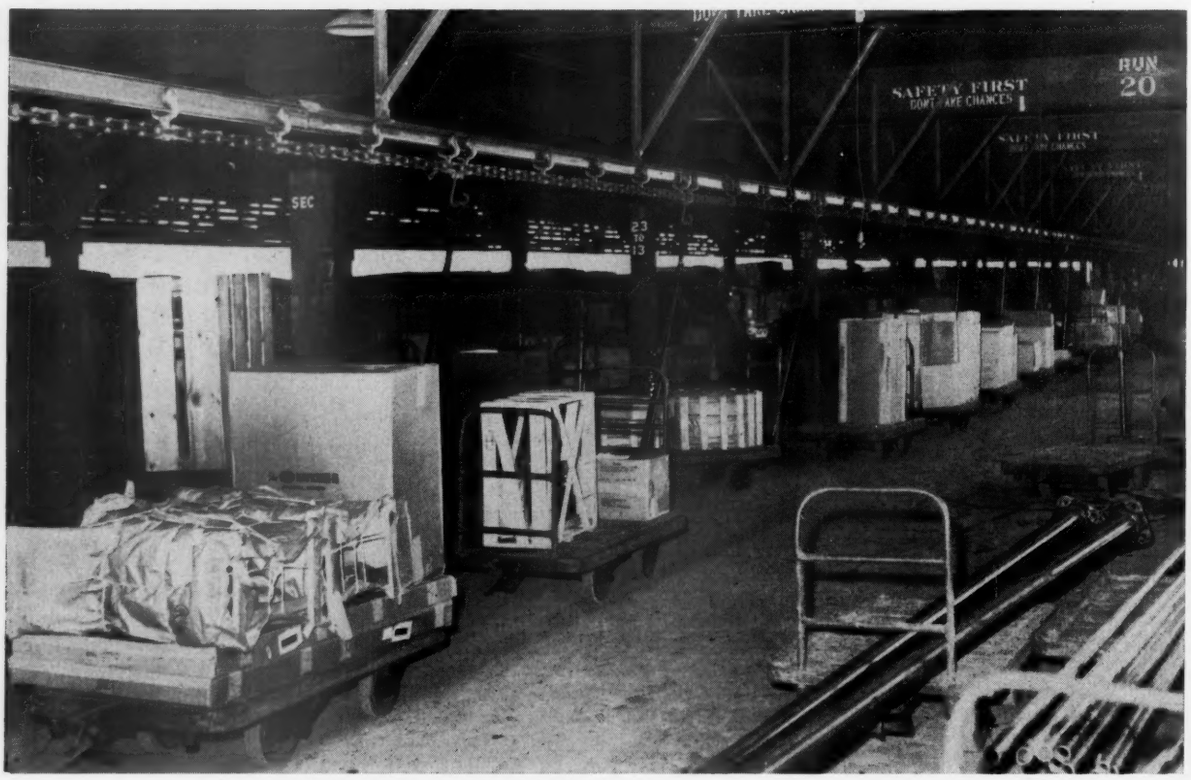
Top—Gypsum lath placed vertically along the board leaves openings for fork-truck unloading. Chances for damage are slight when the gypsum board is removed in neat unit loads

Center—The end bracing is built on standard flat cars—usually when they are ready for general repairs—at an average cost of $325 to $375 a car. The heavy construction is desirable to give stability to the 45- to 55-ton loads shipped on the open-top equipment

Bottom—Gypsum board is unloaded from a flat car by the Reserve Supply Company, Minneapolis, whose entire operations are mechanized. Reserve Supply was the initial consignee of gypsum board on flat cars three years ago, and has since received several hundred, with appreciable savings in unloading each

Conveyor Assures Faster L. C. L. Handling

Platform-truck tow system reduces freight damage and delay at Milwaukee's Galewood transfer, and is self-liquidating



Platform trucks are hooked onto the overhead chain at 12-ft. intervals

Through the installation of an overhead platform-truck conveyor system on the platforms at its Galewood freighthouse and transfer in Chicago, the Chicago, Milwaukee, St. Paul & Pacific has achieved a number of major advantages—for shippers as well as for itself. Now there is no possibility that Chicago shippers and receivers of freight over the Milwaukee will see their shipments tied up for the week-end by the last-of-the-week deluge of l.c.l. freight that normally prevails at most freighthouses. The recently installed conveyor system has given the freighthouse platforms a new Friday-afternoon look—a cleaned-up "bring-us-some-more-freight" aspect.

Outstanding Advantages

Furthermore, the week-end accumulation of l.c.l. business that normally swamps a freighthouse again, starting Monday, is now all cleaned up at Galewood by Tuesday night, including the freight regularly received on the first two days of the week. Freight business that is received on Wednesdays, Thursdays and Fridays is cleaned up each day by quitting time. Galewood handles a volume, based on outbound weight only, of 1,000 tons to 2,000 tons a day.

Among the most interesting and promising developments that have resulted from the installation of the new overhead conveyor system, based on its first few months of operation, are:

(a) It can be operated safely.

(b) It has increased freight-handling capacity by at least 10 per cent.

(c) It has saved delay on many shipments as much as a day and, with some week-end deliveries, by as much as two days.

(d) It has greatly relieved platform congestion.

(e) It moves truck traffic in a clockwise direction only, thereby requiring only one traffic lane and affording more platform working area.

(f) It reduces shock to loads in starting and stopping

trucks, thereby minimizing damage that would result from spilled loads.

(g) It supplies empty trucks at any time that they are needed, thereby raising employee morale by eliminating the hoarding of trucks as practiced by some freight handlers.

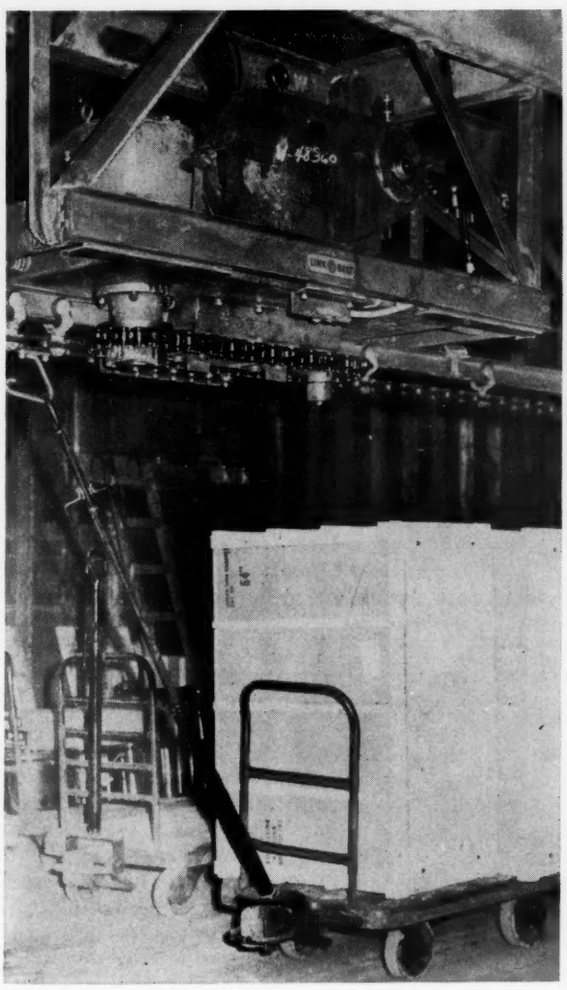
Galewood transfer consists essentially of two long canopy-covered freight platforms, extending from east to west and connected by two movable bridges, a freighthouse and second-floor office built over the northerly platform; and a combination platform office and locker room built adjacent to the southerly platform.

The station is served by 10 tracks and a concrete driveway 100 ft. wide. The northerly platform, 32 ft. wide, is used for outbound freight and is served by two through tracks on each side. Forty cars can be spotted on each track for serving this platform. The southerly platform, 40 ft. wide for most of its length, is used for inbound freight received in cars and for the loading and unloading of highway trucks. The latter platform is served by three through tracks of 40 cars capacity each on its north side, three stubbed tracks holding 13 cars each on the south side at its east end, and 62 unloading truck spots and 42 loading truck spots along the south side of its westerly end.

While this arrangement will permit 159 cars to be spotted for inbound freight and 160 cars for outbound movement, the usual setting at the present time is 120 cars for unloading and 116 cars for loading operations. This number of cars allows for flexibility in operations because the usual daily l.c.l. requirements at present run from 90 to 110 cars of freight unloaded and 135 cars loaded, while the trucking business runs from 100 to 150 truck trailers unloaded and 40 trailers loaded. The operations at Galewood involve movements from car to car, car to trailer, trailer to car, and trailer to trailer.

The use of an overhead conveyor system for Galewood transfer had been under consideration by the railroad for some time, but, until recently, no system available would satisfy the needs of this freight station. Eventually, it became obvious that the only practicable solution of the problem would be a system that would encompass both platforms and also the two movable bridges in one complete circuit.

The movable bridges, spanning a 65-ft. 4-in. gap



Left—One of the two 20-hp. motors which power the chain conveyor. These motors have three speeds so that the line speed can be adjusted to suit conditions. Right—Telescopic mast is extended to reach tow hook 8 ft. above the platform, and is equipped with a spring within the shaft to absorb the initial shock of the pull

The lift bridge spans five tracks between the platforms and is raised each night to a track clearance of 21 ft. 6 in. to permit these tracks to be switched

between platforms, remain in their usable position during working hours and are moved out of the way immediately thereafter to permit the loaded cars to be taken out and replaced with empty cars. The two bridges are of different types, one being a lift bridge and the other a roll-away type.

The roll-away bridge is essentially two uncovered rolling platforms which connect the freighthouse platforms about 55 ft. from their west ends. The two parts of the bridge, each 12 ft. wide by 30 ft. long, are mounted on wheels which roll on the rails of the through tracks. Hinged trucking plates connect the two parts with each other and with the freighthouse platforms.

After the close of the day's activities, one of the freighthouse tractors is used to tow each part separately about 120 ft. east along the rails to a set-off track, where transverse wheels at the four corners of each bridge unit are lowered by means of jack screws to engage the rails of the set-off track. Each bridge unit is then pushed into the clear so that the through tracks can be switched.

The lift bridge is located 1,314 ft. west of the roll-away bridge and consists of a roofed platform providing a roadway 20 ft. wide by 65 ft. long. The span is supported on steel towers and is raised by means of steel cables, pulleys, counterweights and motors to provide a track overhead clearance of 21 ft. 6 in.

Chain Tows 235 Trucks

Working with the engineers of the Link-Belt Company, the railroad devised an endless-chain conveyor circuit, rectangular in shape, that travels along the centerline of each platform and over the movable bridges on an overhead track. The track and the chain can be disconnected at night at each end of the lift bridge and at the middle and at each end of the roll-away bridge. The chain is 2,820 ft. long.

The track is made from 4-in. I-beams, butt-welded together and supported every 11 ft. 6 in. on steel angle hangers fastened to the roof framing. The conveyor chain is made from 4-in. drop-forged and heat-treated Keystone chain and is supported 8 ft. above the floor on U-shaped hangers, the upper ends of which are suspended from two roller-bearing wheels, placed one on each side of the I-beam, with the wheels operating on the upper surfaces of the lower flanges. Towing hooks are fastened to the chain every 12 ft., thus giving a capacity of 235 trucks to the complete circuit.

The chain is disconnected at about the middle of each bridge at night by removing a coupler pin from the link immediately behind any tow hook. When the pin is removed, the chain can then be pushed back each way to bunch together on the track, much like pulling back window draperies.

Alteration work on the lift bridge required by the conveyor system consisted of the installation of steel angle hangers to support the conveyor track. Work required on the roll-away bridge consisted of erecting steel supports for a new roof canopy and for the track hangers.

Line Speed Can Be Changed

Two 20-hp. Westinghouse Type CS motors were used to power the chain, through caterpillar-type drive units, and were installed near the opposite corners of the rectangular circuit to equalize the load on each motor. The motors are so connected electrically that they start and stop simultaneously, and each is capable of maintaining any one of three speeds—1,200, 900 and 600 r.p.m. An additional motor was provided as a stand-by unit.

There was a definite reason why the railroad used motors with the three-speed characteristic. It was estimated that a speed of the chain that would cause 10 trucks to pass a given point each minute would

handle the l.c.l. business at this point, but, if the estimate should prove incorrect, the railroad wished to be able to speed up the line by as many as three trucks a minute if the estimated speed should prove inadequate, or slow it down by three trucks a minute should the line prove too fast.

Special Hitching Mast Used

The first month of operation of the new conveyor system developed the fact that a speed of 13 trucks a minute worked out to be the normal line speed, but that a speed of 15 trucks a minute is desirable during peak loading periods, especially when the assemblymen and helpers are cleaning up their platform areas near the close of the day's work. A change in the sprocket gear ratio is now being contemplated so that line speeds producing 15, 13 and 10 trucks a minute can be obtained. At these speeds, a tow hook will require 15⅔, 18 and 23½ min., respectively, to make a complete trip of the circuit.

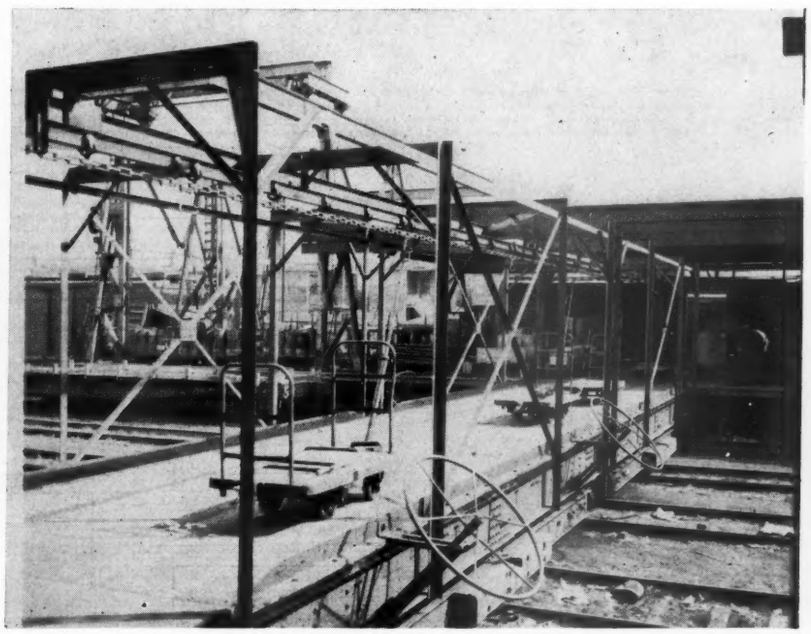
An ingenious telescopic mast was devised by A. E. Ward, agent at Galewood transfer, for converting the platform trucks for use with the overhead tow system, and was made at the company's shops. These masts, attached wagon-tongue fashion to the front ends of the trucks, are about 5 ft. long and stand upright while the trucks are idle or being loaded, but can be extended to a length of about 8 ft. 6 in. and moved in a vertical arc by hand. A wide semi-circular eye has been welded to the upper end of each mast for engaging the tow hooks of the chain, and a spring has been placed within the mast shaft to soften the starting jerk of the tow hook. The old couplers of the platform trucks were not removed but a guard has been built into the lower end of the masts to prevent the couplers from automatically meshing should the trucks be pushed together.

The work-day at Galewood transfer starts at 8 a.m. Since the installation of the conveyor system, six men immediately repair to the movable bridges each morning to reconnect the overhead conveyor track splices and the chain. Generally, one man can lower the lift bridge, connect the chain and the two track splices in about 8 min., while it requires five men and a tractor about 20 min. to push the two parts of the roll-away bridge into place and connect the chain and the three track splices. While this work is being done, other men are laying the metal trucking aprons between cars and between cars and platforms, and others start unloading operations. The chain movement is started about 8:40 a.m. by the platform foreman who inserts and turns a key in any one of the key-operated switches placed at 400-ft. intervals along the south platform. A safety feature has been incorporated in the electrical wiring system to make the switches inoperative unless the bridges are in place and the splices made.

Freight Is Marked for Cars

As merchandise is unloaded from cars, it is loaded on the platform trucks and marked prominently with a number. A number is assigned to one or more of the freight cars to be loaded. When loaded, the platform truck is pushed or pulled by an assemblyman toward the tow lane, and the mast is extended and hooked onto the first empty conveyor hook that comes along. The truck is then towed across the lift bridge to the north platform.

Here, as a platform truck with a load marked, for example, No. 5, comes abreast of a freight car similarly numbered, a waiting assemblyman unhooks the mast from the tow hook. This is accomplished by pushing the truck forward at a speed slightly faster than the conveyor chain speed, and by holding the mast in an extended position so that the mast eye will clear the tow hook. The loaded truck is then pulled



Empty trucks pass over a two-part roll-away bridge in returning to the south freight platform. The bridge is rolled along the rails of the through tracks at night to a set-off track

to one side, the nearest empty truck is fastened to the tow hook for return to the south platform, and the loaded truck is trundled into the proper freight car for unloading.

Platform trucks carrying freight for loading into highway trucks and trailers are unhooked from the overhead conveyor before they cross over the lift bridge, after which platform tractors tow them in a train to the outbound truck-trailer spots. For merchandise brought in by highway vehicles, the handling procedure is the same as for car-to-car operations, except that the truck drivers obtain receipts for their deliveries at the platform office.

Some Shipments Save a Day

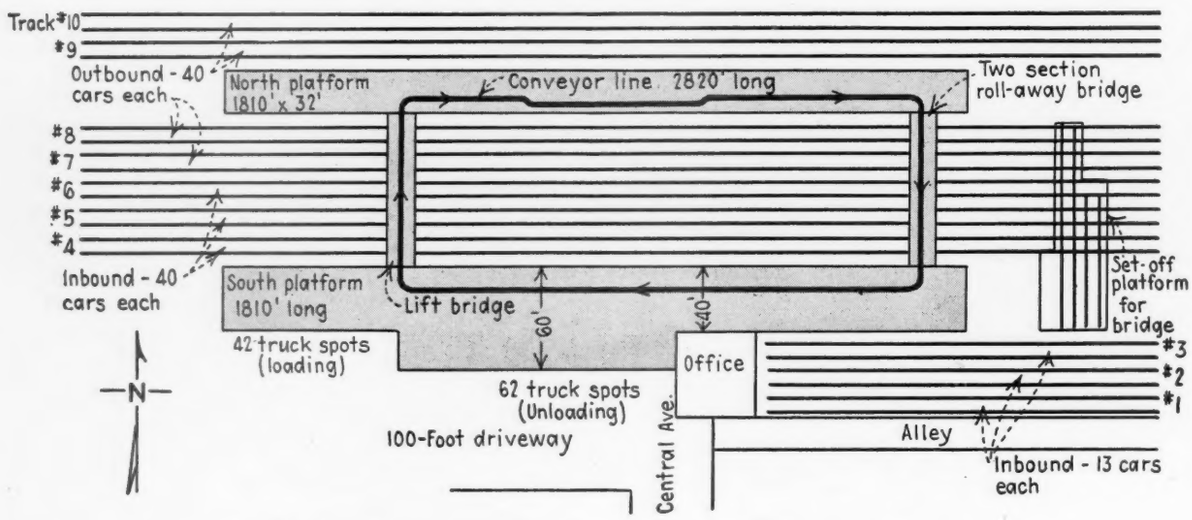
The percentage of platform trucks that fail to be taken off of the conveyor line on the north platform is very low, and only a fraction of one per cent of the loads ever make more than one complete circuit. The loading of the platform trucks continues until just about 5 p.m. The last loaded platform truck is placed on the tow line at 5:05 p.m. and the conveyor line is shut off at about 5:20 p.m. It is frequently possible to save a day's time in handling freight, especially merchandise delivered by auto truck or trailer within an hour or two before the conveyor is shut down. Cars on the tracks of the freighthouse are pulled at 5:45 p.m. However, freight is received from highway vehicles until 11:30 p.m. and is loaded on platform trucks by a skeleton crew beginning work at 3 p.m. and quitting at 11:30 p.m.

Two chain take-ups have been installed in the conveyor system, one on each platform at opposite corners of the circuit, to keep the chain taut and free from buckling. Another feature is an automatic oiler which causes a fine mist of oil to be sprayed on the roller bearings of the chain hanger wheels and on the chain. This device is turned on about twice a week and is turned off after the chain has made one or several complete circuits. To avoid waste of the oil, a tripping device, activated by the passage of each pair of hanger wheels, automatically starts and stops two jets of oil mist directed at the roller bearings.

A still more important feature is the provision of "stop" switches every 46 ft. along the platform lanes of the system. These consist of hanging bell cords which, when pulled, stop the chain movement almost instantly. Thus, if an employee notices a dangerous situation, or if a load is in danger of falling, the line can be stopped before an accident occurs. These "stop" switches are very sensitive and require only a slight pull to operate them. When the chain line has been stopped it cannot be started again until the platform foreman inserts his key in a key-operated switch. There is little temptation for an employee to stop the line as a prank, because every line stoppage is questioned for an explanation over the communication system with which the freighthouse is equipped, and the platform foreman must secure the "green light" from the agent's office before using his key.

While the men apparently are having no difficulty in hitching and unhooking the truck masts, Agent Ward is working on a new tow-hook coupler which will merely require a sharp backward blow of the hand on the mast to disengage the mast eye from the tow hook. Another of Mr. Ward's inventions, in general use throughout the freighthouse, is a one-man operated device for picking up the metal trucking aprons and rolling them into place between platforms and cars.

The platform-truck conveyor system at Galewood is the result of careful study given by L. F. Donald, general manager for the road's Line East, W. L. Ennis, assistant to vice-president, and Mr. Ward to the problems of improving the service at this point, assisted by B. G. Pobloske, assistant agent, and C. Pethes, general freighthouse foreman. The conveyor system was manufactured and installed by the Link-Belt Company, Chicago. Plans for the conveyor support, for the alterations to the bridges, and for the electrical safety controls were developed under the general direction of C. T. Jackson, chief engineer, and under the direct supervision of B. J. Ornburn, assistant chief engineer—structures, and E. E. Burch, bridge engineer.



Plan of Galewood freighthouse showing the layout of the overhead conveyor system

Western Pacific Tries Plastic Car Flooring

Low maintenance and damage prevention advantages claimed for oxychloride box car floor surfacing

The Western Pacific has in service a total of 70 box cars in which the flooring has been surfaced with oxychloride, or "Plastinail," a smooth, durable and fire-resistant plastic. The first application was made experimentally to car No. 20071 in December, 1947, by the Westvaco Chemical Corporation, Newark, Cal., and in January, 1948, the car was placed in less-carload service between San Francisco, Sacramento and Salt Lake City. After observation for 11 months, inspection revealed that although the car had been subjected to heavy loads, requiring considerable floor blocking, lading had included rough equipment such as discs, harrows, drums and steel beams, and it had been loaded and unloaded with fork-lift trucks, the floor was in excellent condition.

As a result of these observations, 10 additional plastic floor installations were authorized. Subsequently, an additional 59 cars have been so equipped, and all 70 cars are now in regular interchange service.

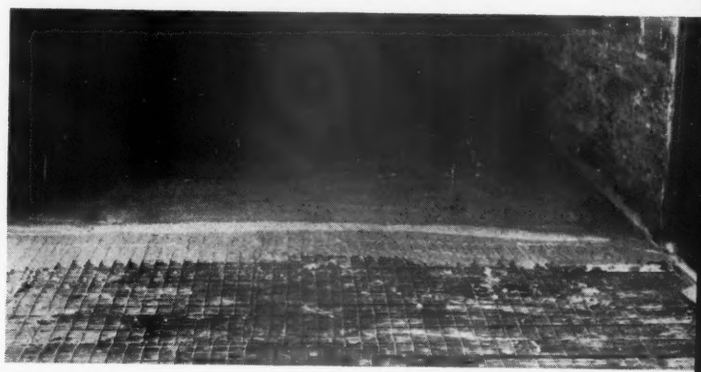
Maintenance is held to a minimum, and the time out of service reduced, because of the long wearing qualities of the plastic surface. It is impervious to oil, grease and most acids, and is not affected by temperature changes. The smooth surface and absence of cracks and openings simplifies cleaning. The cost of ordinary surface repairs has proved very low. Repair of nail holes and damage caused by the improper use of a crowbar on the two-year-old floor of car W. P. 20071 was accomplished with $1.50 worth of material and $5 labor cost, using a broom, a chisel, a small amount of mixing material and a putty knife.

The plastic is applied over a layer of wire bond. While the surface can be troweled to any desired finish, the W. P. adopted a slightly roughened surface to provide some friction and minimize shifting. The consequent security of the lading has helped reduce loss and damage, as has the freedom from projections.

The Western Pacific has found the new floor excellent for bulk grain shipments. The absence of splinters, nails and worn boards has proved it to be suitable for shipments in paper bags. An arrival report on a shipment of seven carloads of rice in paper bags from West Sacramento to New Orleans indicated that not a single bag was damaged by the car floors, although they had not been protected, as is customary, with paper.

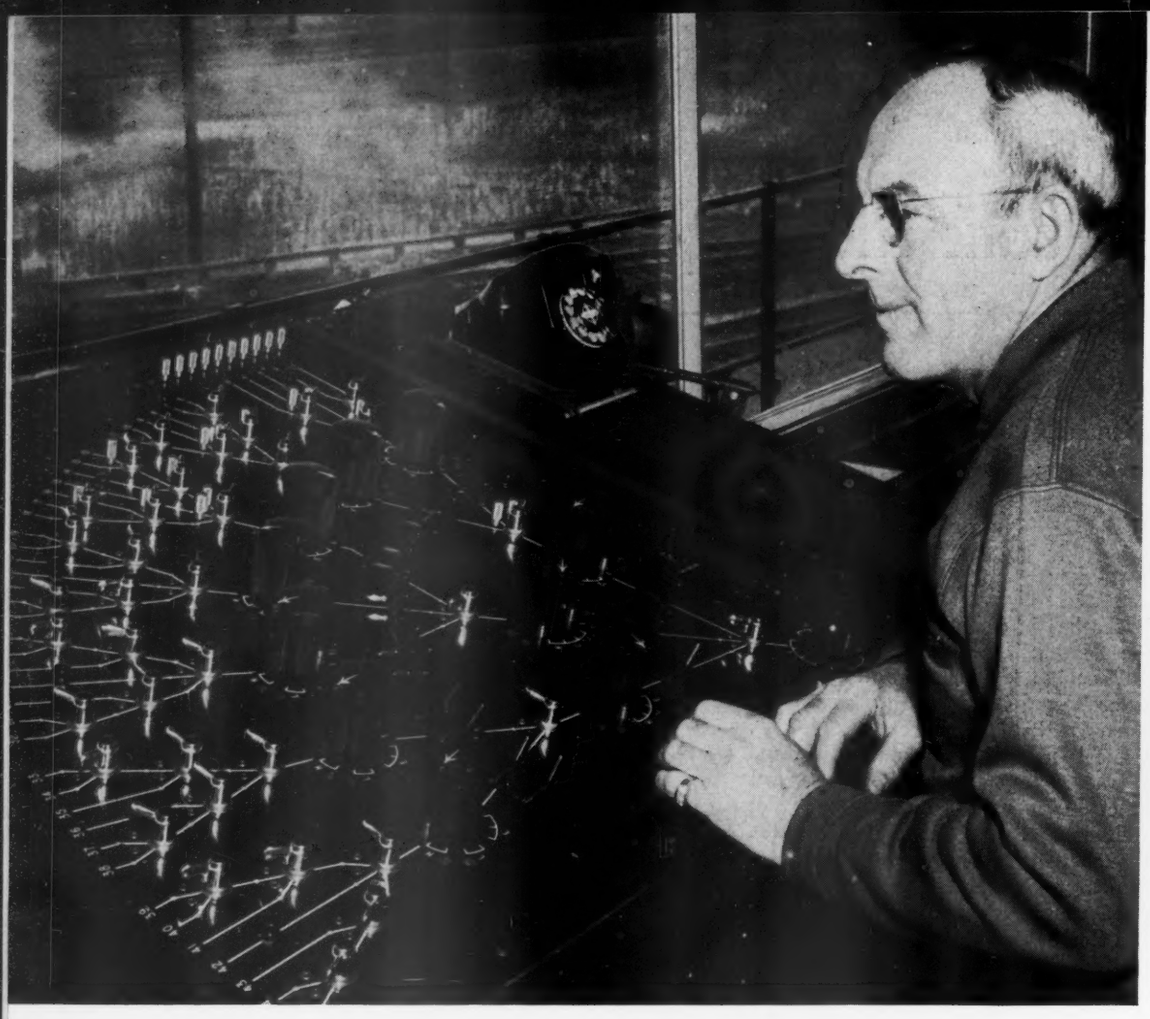
A recent inspection of 26 floors showed that they were all in Class A condition, without cracks, and that nail holes resulting from removal of dunnage had not affected the continuity or surface smoothness to any degree that would offer resistance or damage to ladings.

A Western Pacific box car ready to be refloored with plastic. If old floors are strong, it is not necessary to make any repairs before application of oxychloride. The floor is swept clean, covered with a wire bonding, and coated with plastic



Plastinal has been applied to one half of the car, but not troweled to the desired finish. The wire bond is nailed in place

After troweling, plastinal provides an even floor from end to end and side to side, with no warping, splintering, updraught or leakage of lading possible



The man at this machine in the tower controls all the retarders used in regular operation of the yard

"PUSH-BUTTON" CLASSIFICATION SPEEDS

A new system of control for power switches and retarders has been installed by the Illinois Central in its southbound classification yard at Markham Yards, 20 miles south of the passenger station at Twelfth Street in Chicago. This new installation, the first of its type to be put in service, makes practically continuous humping possible 24 hours per day, while providing positive control of switching speeds.

This southbound yard, as well as the northbound yard nearby, were built in 1926, and at that time they were the first yards to be equipped with car retarders of commercial manufacture. Original installations were based on the ladder principle, with retarders down the hump and the throat leads, as well as on the upper end of each classification track. The southbound yard with its 43 classification tracks, 43 power switches and 72 retarders was controlled from four towers, each of which handled the retarders and switches in their corresponding areas. Within a few years after the original yards at Markham were placed in service a new group arrangement of tracks was developed in yards on other roads, the object of which was to reduce the number of retarders required, because one retarder on the lead to each group serves to apply final retardation to cars routed to all of the tracks in that group.

Having rendered 23 years' service, the retarders, switch machines, control machines and rail in the Markham southbound yard were due for replacement. A decision was made that the replacement program should include a change from the old ladder-track layout to the more modern grouping of tracks, as well as a change in grades. About that time—early in 1949—the General Railway Signal Company, which furnished the switch machines and retarders installed in the southbound yard in 1926, announced the development of a new system of control, which was adopted for installation as a part of the improvements. Starting in June, 1949, the change-over to the new track layout, new grades, and new retarders with a new system of control for power switches, has been made gradually, under traffic. As of June 1, 1950, the new system was in service on 35 of the total of 45 tracks. [The same system is being installed by the Canadian Pacific in its new yard at Montreal, which is scheduled to go in service in July.]

As built in 1926, the yard had 78 retarders totaling

The control of switches for a route to a classification track is initiated by pushing a button on a panel at the hump

CARS THROUGH ILLINOIS CENTRAL YARD

The control of switches is automatic after being initiated at the crest of the hump, and all retarders are controlled by one man

5,022 rail feet, 43 power skate machines and four control machines in four towers. In the rearrangement, two more yard tracks were added making a total of 45 tracks, which are arranged in groups, one with five tracks, two with six, and four with seven tracks each. In the new improved yard arrangement, there are 45 power switches and 21 retarders with a total of 1,683 rail-feet of retardation as compared with 5,022 rail-feet of retardation previously in service with two less tracks.

In the previous layout there was a power-operated skate at the lower end of each of the 43 yard tracks. These were eliminated. Also in the old yard there were two tracks up to the crest and down toward the yard so that cars to be classified could be pushed over the hump on either track. A portion of one of these tracks was removed. Now all cars are pushed over the crest on the one track which is equipped with a track scale. The second track with its power switch is used to route a locomotive around the scale. This switch is controlled manually from the hump office.

As part of the change-over to track groups, the grades down the incline and through the main leads were revised to conform with present-day practices for use with retarders as applied to this track arrangement. These grades are indicated on the plan herewith. One change was to make the grade steeper down the incline as far as the intermediate retarder, thereby increasing the rate of acceleration. The objective of this is to increase the running distance between cars or cuts of cars.

In order to minimize the length of track taken up by turnouts, lap switch layouts were used as required. In the previous yard, no track circuits were in service

to prevent the operation of a switch under a car which would cause a derailment. Such accidents are prevented by detector locking, controlled by track circuits, a system installed in practically all yards equipped with power switches during the past 20 years and incorporated in the new installation at the Illinois Central southbound yard. The old retarders, which were of the electric type, were worn beyond repair, and were, therefore, discarded. The 21 new retarders are also of the electric type of a modern design. Some of the switch machines in the new yard are of a new high-speed type. These are used where the track circuit in advance of the switch is short. All switch machines are trailable. Most of the old switch machines were rebuilt and installed in the new yard.

One Tower Replaces Four

The four old control towers were removed and one new brick control tower was constructed along the east side of the main yard lead at a location indicated on the accompanying plan. The wiring distribution for power and control circuits, as well as the control system, are all new.

With the old arrangement, the men in the four towers each controlled not only the retarders, but also the switches in an assigned area of the yard. One of the features of the new system, as installed by the Illinois Central, is that the switches are normally controlled automatically, after the control for the route for each car or cut of cars has been initiated by operation of a corresponding button. These push-buttons—one for each of the 45 classification tracks—are on a panel in a small office at the crest of the hump. As a car or cut of cars approaches the crest of the hump and is being cut off, a man at the hump pushes the button which is numbered for the track to which this cut is to go, as shown on the switch list. For the first car of a "train," as soon as the button is pushed, the first switch in the route takes the position required. When the car or cut of cars enters the detector track circuit for that switch, controls are then automatically advanced to the next switch in the route.

As each succeeding car or cut of cars is pushed up to the crest of the hump, the operator pushes the button numbered for the track to which it is destined. Controls for switches are set up in the same manner as for the preceding car. If the operator at the crest should push the wrong button for a car or cut approaching the crest, he can revise the set-up after pushing a "cancel" button. All operations of switches to route cars from the hump to their classification tracks are normally controlled by this automatic system.

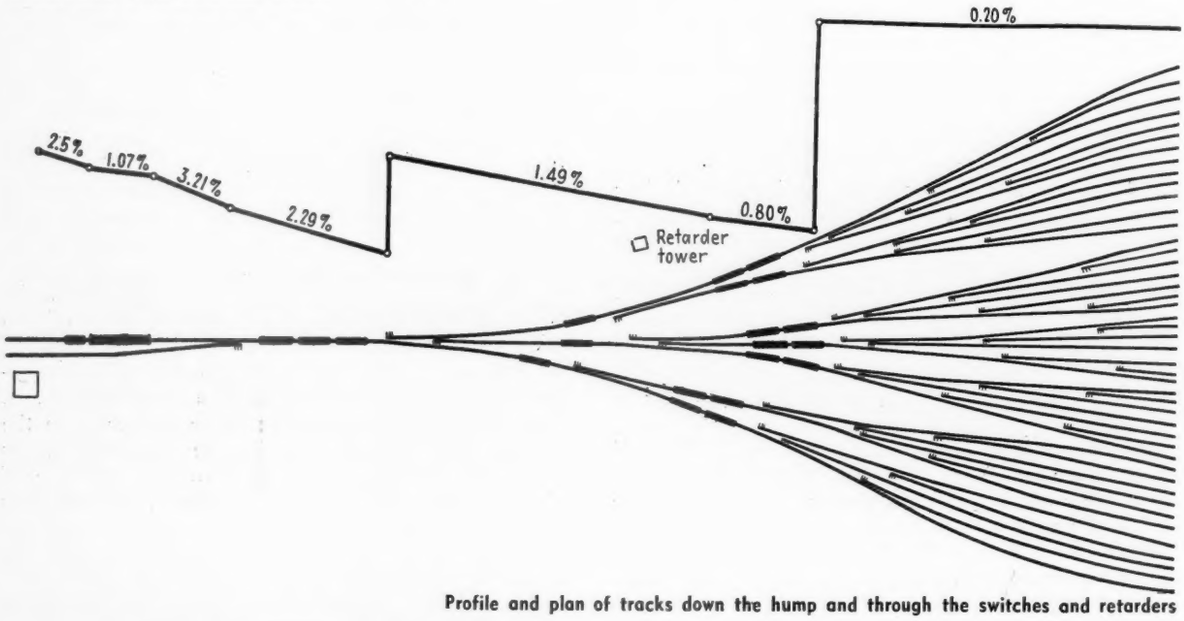
Between the crest of the hump and the track scale there is a short retarder that is used when necessary to hold a car off the scale or reduce its speed when going onto the scale. This retarder is used also to hold slack as an aid in pulling a pin that is stuck. This short retarder is controlled from the hump office.

Retarders Now Controlled from One Tower

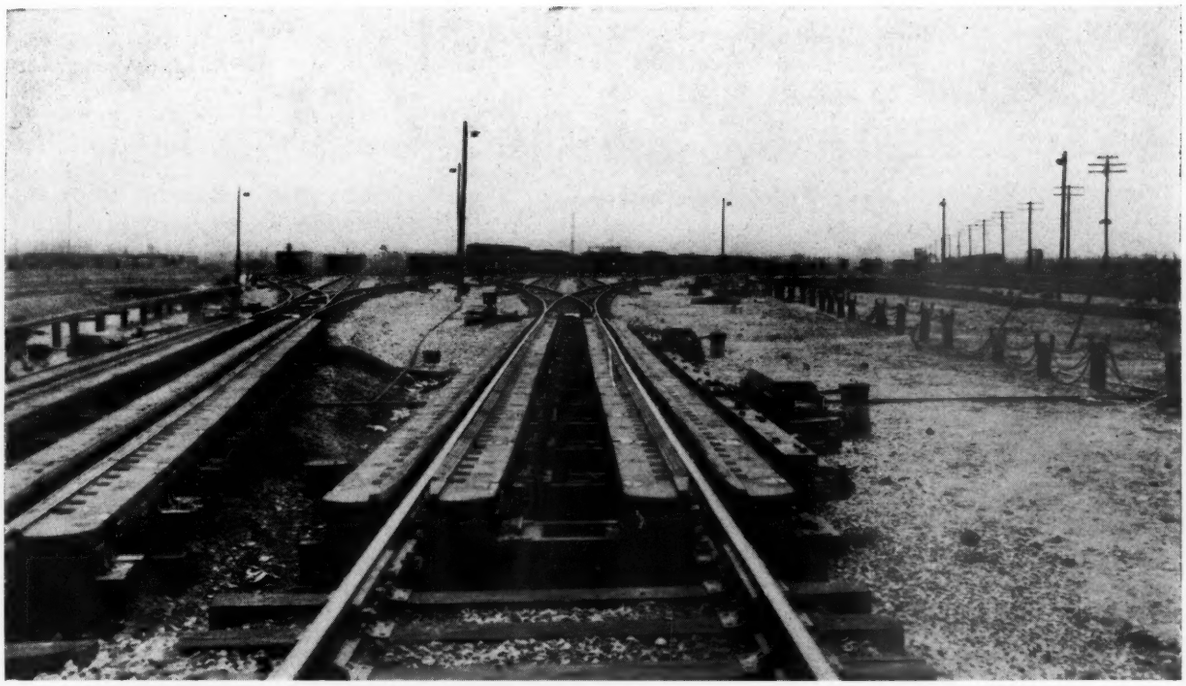
The other retarders—i.e., those in the 10 locations down the hump and on down the leads—are all controlled by one retarder-control machine in the new tower at the east of the main leads. This new tower is of brick construction, with control room 9 ft. by 15 ft.

Glare-proof plate glass windows are used on the track side and the two ends of this room. From rail level to the floor line on the top story is 30 ft. At this height the towerman has a good view of cars when moving down the hump and throughout the retarder area, as well as down into the classification tracks.

On the 40 in. by 40 in. panel of the control machine in this tower is a schematic diagram of the tracks, switches and retarders. Small indicating lamps are located in the white lines which represent the tracks. When a car or cut of cars approaches a switch over which it has been routed by the push-button control, its selected route is indicated to the towerman by the progressive lighting of the indicating lamp immediately



Profile and plan of tracks down the hump and through the switches and retarders



This retarder provides final retardations for cars routed to a group of six tracks

ahead of the car. During the time that a car is occupying the track circuit through a switch, a red lamp is lighted in the symbol representing the switch. Thus on this panel, the towerman can see the routes lined and the locations of cars.

On this control panel each of the 10 retarder locations is represented by a raised black knob which can be rotated, as indicated by a dial, to control the corresponding retarders to the open position or to any of seven closed positions, each giving an increased degree of retardation. The switch list shows whether cars are empty or loaded and if loaded, the lading, so that the towerman can form a fair estimate of the retardation required, and he rotates the dial to set up a retarder before a car approaches it. As the car passes into the retarder, he watches until the speed is reduced as required at that location, then he can quickly release each retarder section by throwing its corresponding key-type lever. These levers are in line with the "track" and in "approach" to the corresponding knob controllers. When he returns this key lever to normal, the retarder takes the position called for by its knob controller. The retarder, therefore, either resumes its setting for the next car, or the setting can be changed to suit the weight and speed of the next approaching car. Under normal automatic control the towerman has nothing to do with the control of switches.

Speed of Operation

The average speed of pushing cars up over the crest ranges from 3.5 to 4 m.p.h. If there is an average of three or four cars per cut, the pushing speed can be faster than if the average is 1.5 to 2 cars per cut, because running space must be allowed between the cuts. During the yard reconstruction, the traffic has been handled by one engine and yard crew to push cars from the receiving yard over the hump. This operation introduces some delay when the engine goes back to the receiving yard for more cars. Based on experience to date, the men operating the yard express opinions to the effect that they can classify all the traffic that may be offered, up to a range of 800 to 1,000 cars in each 8-hour trick, providing engines are available to push cars over the hump continuously except when necessary to trim the yard. It has been demonstrated that trimming is required so seldom that practically continuous humping is possible.

When the maintainer is testing or adjusting a switch, or when setting up routes for the trimmer engine, the switches are controlled individually by levers on the towerman's panel. On the schematic diagram on this panel each switch is represented by a small rotary-type lever. These levers are turned to the "right-hand" or "off-track" position at all times when the automatic control system is in effect. When the yard is clear and a switch is to be operated individually, the corresponding lever is moved to the position over the white line representing the route to be lined.

This yard reconstruction program was planned and carried to completion by railroad forces under the jurisdiction of C. H. Mottier, vice-president and chief engineer. The grading and track work was under the direction of J. S. Francis, assistant engineer. Engineering with respect to power switches, retarders and controls was under the direction of H. G. Morgan, signal engineer, with construction work being handled by supervisor of signals, W. R. Hutchings. All the signaling equipment, including retarders, switch machines, control apparatus and relays, was furnished by the General Railway Signal Company.

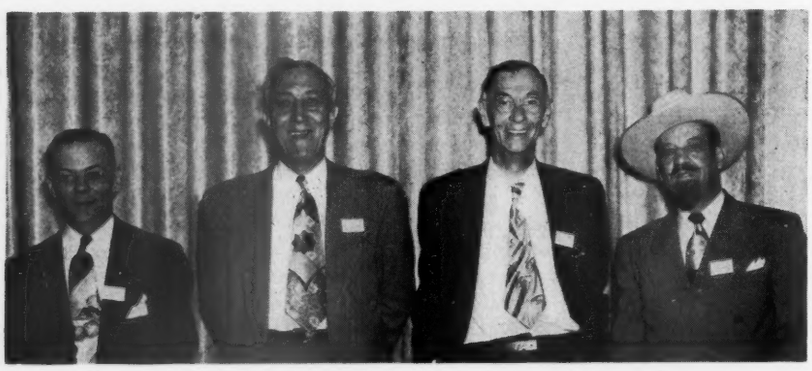
"Improve Service And We Will Regain Business," Say Freight Agents

Schwietert suggests practices for eliminating loss and damage—Rate concessions on pallets urged, to encourage pallet shipping

Better service is deserved by the railroads' patrons, and if the service is not improved the carriers' business will continue to decrease—such was the tenor of the discussions of some 600 railroad men, mainly freight agents, at the annual meeting of the Freight Station Section of the Association of American Railroads, held at the Hotel Statler in St. Louis, June 7, 8 and 9. Reduction of loss and damage, tariff simplification, fewer circuitous routings, encouraging increased shipper use of pallets (through rate concessions), all were suggested as aids in stopping diversion of traffic and in helping to regain business already diverted. General rate reductions were mentioned, but the feeling was that it was more important at this time for the railroads —and the people at this meeting—to concentrate now on service improvements. The convention was presided over by the section chairman, C. F. Allen, superintendent of station service and weighing of the Canadian National.

Most of the time at these meetings of freight agents is devoted to developing better ways to do the necessary work at individual stations. The meeting this year was no exception to this rule, but much more time than is customary was spent in considering matters of overall policy for possible adoption by the A.A.R. and the individual railroads. For example, rate reductions on pallets were urged. Increased use of pallets would be beneficial to all parties, it was contended, but with present rates it is generally uneconomical for the shipper to use pallets. Tariff complexity also was scored and pleas for simplification were made. In the discussion of this question it was brought out that if tariffs were drastically simplified a lot of traffic people—both railroad and industrial—would join the ranks of the unemployed, a prospect likely to discourage prompt and complete exhaustion of all possibilities operating in this direction.

Real concern was expressed over what the size of the freight claim bill has done to persuade shippers to divert traffic to other modes of transportation. Support



The four extremities of the Gulf, Mobile & Ohio are represented by the agents in this photo. Left to right: E. E. Powell, agent at Chicago; George Kaufmann, agent at New Orleans; C. G. Lang, agent at Mobile; and R. T. Kingman, agent at Kansas City. Mr. Kingman's beard and hat are occasioned by Kansas City's 100th anniversary celebration

Four more people stood still long enough for our camera to go into action. Left to right; Forrest Bennett, freight claim agent, Monon; N. N. Cedarleaf, superintendent of station service, Chicago & North Western; J. F. Kohout, agent at Proviso, Ill., for the North Western; and C. W. Miller, general agent, St. Louis-San Francisco, Kansas City

for the view expressed by some agents that cutting loss and damage would make railroad freight service more salable was expressed by A. H. Schwietert, director of traffic of the Chicago Association of Commerce and Industry, and head of the 1950 Perfect Shipping Campaign. Mr. Schwietert told the agents that they had the support of most shippers in their fight to cut loss and damage, and he asked that the National Management Committee be advised of shippers who failed to cooperate so that the Committee could "put the heat" on them.

Mr. Schwietert said that recently he had asked a representative group of shippers for their suggestions on what the carriers might do to cut loss and damage. The most frequent suggestions were:

(1) Have shippers notified not only of loss and damage but of the probable causes, so they can eliminate any contributory faulty practices;

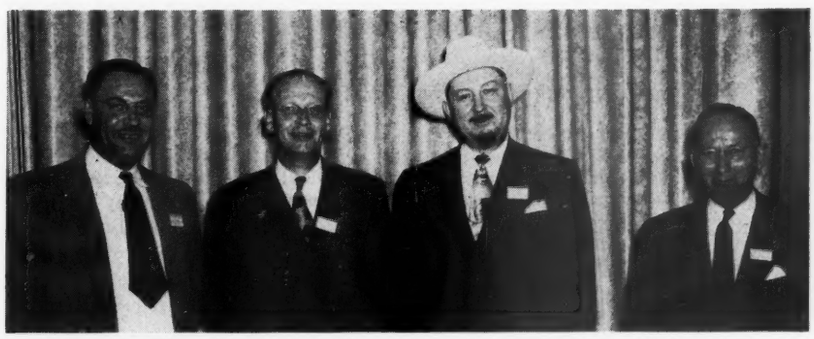
(2) Carriers should reject shipments which are not packed to comply with tariff specifications;

(3) Carriers should modernize their freight stations and install more mechanical handling equipment;

(4) More overhead cars should be established;

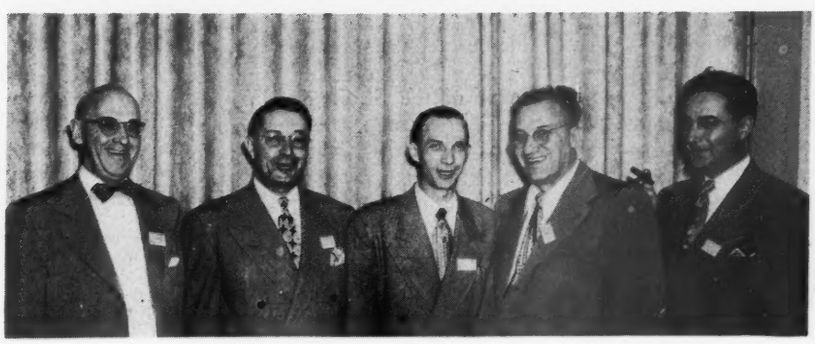
(5) Pick-up and delivery drivers should be held strictly accountable for damage, shortages, etc., while freight is in their possession;

J. H. Hogg, agent of the Nickel Plate at E. St. Louis and W. J. Silich, manager of Station Service, Delaware, Lackawanna & Western (at right) stopped talking about the Lackawanna-Nickel Plate 2nd day service to St. Louis long enough to smile for us



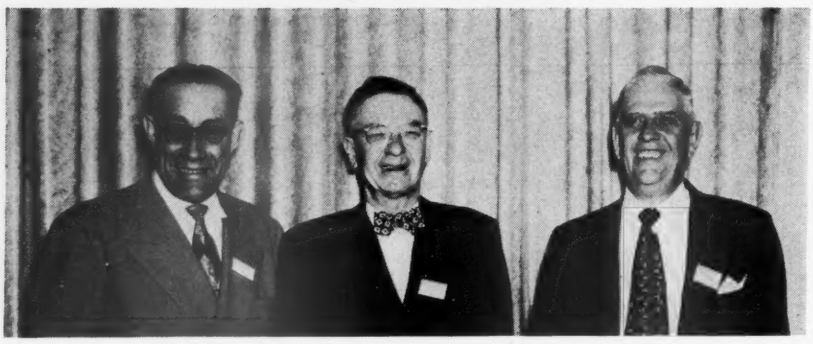
Charlie Woods, superintendent of station operation, Central of Georgia, (at right) is rather overshadowed, physically, by the three men at left who are, in the usual order: C. A. Naffziger, superintendent of stations and claim prevention, Missouri Pacific; C. R. Opsahl, supervisor station service, Northern Pacific; and J. M. Traylor, agent of the Santa Fe at, you guessed it, Kansas City

Left to right; R. C. Linsenmayer, supervisor freight claim prevention, Santa Fe, at Kansas City; W. J. Flusk, agent, Erie, Weehawken, N. J.; W. L. Ennis, assistant to vice president, Milwaukee Road; and Burns Goebner, terminal agent, Baltimore & Ohio, New York



Left to right: H. A. Freeman, agent, Grand Trunk Western, Chicago; Len Mayrisch, manager stations and freight protection service, Southern Pacific; W. E. Todd, secretary, Freight Station Section, A.A.R.; A. E. Ward, agent, Milwaukee Road, Galewood, Chicago; and J. R. Formby, manager stations and transfers, Southern

Left to right: R. J. Roche, agent, New York Central, Cleveland; F. J. Wilson, general agent, St. Louis—San Francisco, St. Louis; A. W. McLin, agent, Missouri Pacific, St. Louis; and F. P. Satterlee, agent, Union Pacific, Seattle



The Northern Pacific and Wabash got together for a moment. Left to right: C. R. Watkins, agent, N.P. at Tacoma; Len McLean, assistant supervisor station service, N.P., Seattle; and C. E. Dore, inspector of transportation, Wabash

(6) More cars with racks for segregating freight are needed;
(7) Railroads should reject cars at stop-off points if the loads are not broken down properly; and
(8) Better inspection reports are needed, and increased use of photographs to accompany the reports will be a real help.

Agent Is "Mr. Railroad" Locally

Mr. Schwietert, a former freight agent, said that he knew how important the agent is in the prevention picture, and he hoped that all present would return to their jobs with some information which would help them in minimizing this economic waste.

Robert S. Henry, vice-president, public relations, of the A.A.R., and M. R. Cring, assistant to president of the Missouri-Kansas-Texas, spoke to the assembly on the public relations phase of the agent's job. Mr. Henry said that the agent could help mightily in putting over to the shippers the injustices being suffered by the railroads because of the subsidization of their competitors. Mr. Cring advised his listeners to get to know their local newspaper editors and radio people. He urged them to "play it fair all the way" with the press and radio men, for, he said, they will reciprocate. For example, he went on to say, if there are accidents, give the press all the facts, for they're going to print something and it's better that they get it correct.

R. J. Stone, general manager of the St. Louis-San Francisco, said that despite the unfair competition with which the railroads are faced, the carriers must go ahead with their improvement programs. In order to make this possible, he pointed out, there must be a continued search for better and less costly ways to do "almost everything we do on the railroad."

H. C. Abbey, auditor of freight receipts of the Missouri Pacific, told the agents how much the railroads' accounting departments rely on the local agent. The agent is, Mr. Abbey said, the primary accountant, for it is he who makes out the waybills from which all freight revenue accounting is done. His care in signing bills of lading also is extremely important, for if he signs for property which is not in his possession the railroad may be faced with a claim.

Digests of the reports and papers on the dockets of the section's four standing committees and accompanying discussion appear below.

COMMITTEE ON LOSS AND DAMAGE

A. E. WARD
Agent, Chicago, Milwaukee, St. Paul & Pacific, chairman

A paper presented by the New York freight agents suggested that much loss and damage could be prevented if the agent himself spent more time on the platform. His visits should not be at any fixed time but should be frequent and at odd moments.

The agents from Pittsburgh, Pa., said that loss and damage prevention would help to stop diversion of l.c.l. traffic to the trucks. Among the suggested methods for cutting loss and damage were: (1) Shippers should be encouraged to put freight on pallets or skids; (2) Railroad use of portable containers for fragile and valuable shipments should be increased; (3) Cars containing one or more shipments whose total weight is 10,000 lb. or more should be "carded" direct to destination; and (4) In "reasonable areas" surrounding zone stations, where truck service is substituted for way freight trains, the truck should take freight directly to the consignee, instead of taking it to the station from whence it will eventually be handled by p. and d. trucks. This would eliminate one handling and reduce chances of damage.

Not enough bulkheads are used in interline cars, said the agents from the St. Louis-East St. Louis area. This is

because carriers object to sending the bulkheads off line because they have experienced difficulty in getting them returned.

It was suggested, therefore, that in order to increase the use of bulkheads in interline cars destination carriers be billed an agreed charge for the use of the bulkhead, which would then become the property of the destination carrier.

Repeaters are causing most of the railroads' loss and damage difficulties, said the Niagara Frontier agents, whether it be a shipper who uses improper containers or a check clerk who let errors get by him. Find the repeater, the paper concluded, set him straight, and most of the loss and damage will be eliminated.

Stop-off cars, as usual, came in for considerable discussion. It was suggested that carriers inspect all cars at stop-off points before they are reforwarded. If it is found necessary to block and brace the load the consignee (intermediate) should be billed for the cost of such work, it was said. This would mean a change in most stop-off tariffs which do not now have such a provision.

Canned goods also came in for considerable discussion, with A. L. Green and E. J. Kraska, special representatives of the A.A.R. Freight Claim Division, leading. Mr. Green said that most canners are doing a good job of canning and packing, and that much of the apparent loss and damage experienced with this class of freight is not damage at all. He called attention to so-called panel dents, which are a natural by-product of canning, and also rim dents which are caused in many cases by the natural movement of cans within the case, a result of the fact that the usual construction of canned goods cases does not hold all cans at the same level and therefore small rim dents are almost inevitable. Mr. Green said that every can expert with whom he had discussed the subject agreed on that. In most cases, he said, neither panel nor rim dents in any way harmed the product. What is needed, Mr. Green continued, is more inspections when the cars are unloaded. He suggested that pictures should be taken and sent to the canner so that he will know what kind of a job he is doing with his loading and bracing.

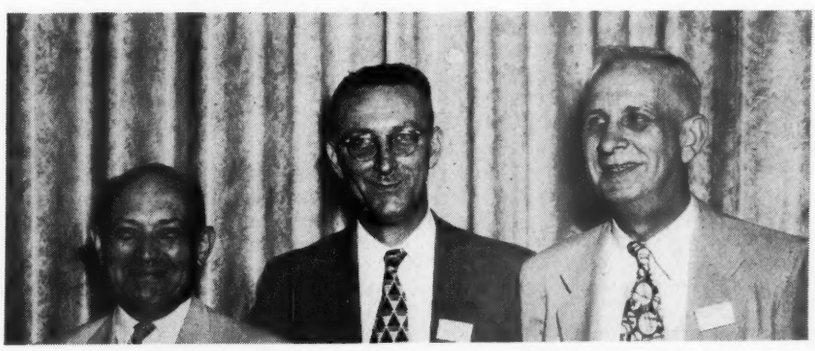
Mr. Kraska, the canned goods expert recently hired by the A.A.R., pleaded again for wider use of the bonded-block method of loading, and for more paper covering for floor racks. He said that while some shippers are objecting to the added expense of putting paper on the floor racks, he felt most of them would go along once they saw how advantageous it is to them. Mr. Kraska, and Mr. Green before him, urged that when floor rack damage was found the car be sent to the rip track immediately or reported to the owning car line.

COMMITTEE ON STATION AND TERMINAL OPERATION

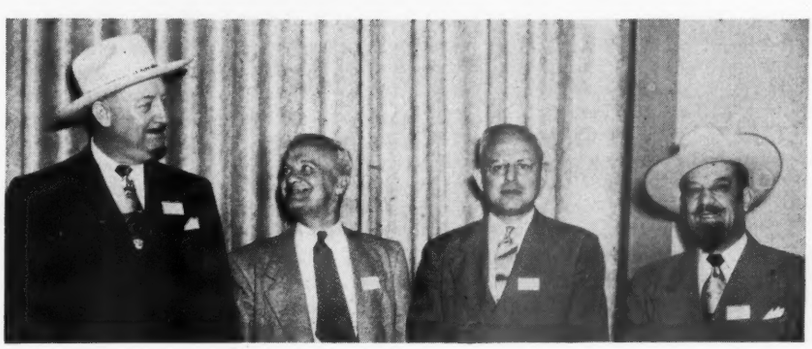
J. F. KOHOUT
Agent, Chicago & North Western, chairman

One of the papers on this committee's docket was submitted by the Freight Agents' Association of New Orleans. It told how the installation of Teletype machines at the yards of the Illinois Central had made it possible to get cars to the station about 12 hours faster than used to be possible. (These cars are export freight and must be held in the yards for the proper steamer to come along.) If orders for placement are received by the agent in time to get word to the yardmaster before 6:00 p.m., the cars are placed the next morning. Before this installation was made this was not always possible. The Teletype receiver at the yard office makes a record for the yardmaster's file and a tag is made at the same time. That tag is placed on the car and the car is switched on the tag. The separate operation of making up the tag used to be one of the causes of delay.

L.C.L. was the subject of much discussion, most of which was directed not only at how to retain present traffic but how to regain that lost to the trucks. Many of the agents seemed to feel that dependable service is the main factor in encouraging the return of more l.c.l. business to the rails. Some participants in the discussion suggested that rates



The Norfolk & Western was there too. Left to right: H. L. Bartholomew, agent N. & W. at Winston-Salem, N. C.; G. W. Ward, agent, N. & W. at Ironton, Ohio; and R. P. Ellett, auditor of station accounts, N. & W., Roanoke, Va.



The bearded Messrs. Traylor, at left, and Kingman, at extreme right, had R. E. Keller of the Kalamazoo Manufacturing Co., second left, and G. H. Hill, superintendent stations and transfers, Pennsylvania, surrounded

Why A. L. Buffer, agent of the Rock Island at Kansas City didn't have the beard we don't know. F. M. Hunt, Pennsylvania agent at Philadelphia, tried to get in the Kansas City group by borrowing a hat and giving a cowboy yell

strictly competitive to the truckers' 5,000 lb. l.t.l. rates are needed before much business can be regained. One agent, however, said that his railroad is holding important business by fast, dependable service, despite the fact that the competing truck rate is 50 cents per 100 lb. lower than the rail rate. He felt that this is an indication that service is the primary concern of shippers and consignees.

More mechanical handling of freight was urged as a cost cutting measure. P.&D. service—considered by some observers as one of the weaknesses in railroad handling of l.c.l,—was thoroughly discussed, and suggestions were made as to ways to improve this service. Close checking of bills in the contract drayman's file case to see that shipments are being delivered promptly is a "must," according to L. J. Ferrel, New York Central agent at Buffalo, N. Y. Mr. Ferrel said that at his station a colored check mark is placed on each bill, the color indicating the day the shipment was unloaded from the car. Thus, at a glance, a check on the drayman is possible and corrective action can be taken when needed.

The Dayton, Ohio, Freight Agents' Association went on record as favoring action by the carriers to encourage the use of pallets (as a shipping aid) by industry. Rate revision on pallets was suggested as one means of furthering the practice.

The Chicago agents presented a paper on cleaning cars. Since agency forces handle so many cars it was felt that if these people were "on the ball" the clean car situation would be helped immeasurably. Thus a lot of damage would be cut, and in the long run so would the railroads' car cleaning bill.

COMMITTEE ON STATION TRAFFIC

W. G. MILLER
Agent, Pennsylvania, chairman

Public relations, freight rates, service and the retrieving of business lost to the trucks were the subjects of papers on this committee's docket. On the first-named subject, a paper by the New York Freight Agents' Association recommended that more personal contacts be made with shippers, even if all the occasion demanded was extending good wishes and passing the time of day.

The agents from Des Moines, Iowa, presented a paper and skit on telephone courtesy which showed how a telephone should be handled, and how proper and considerate use of this instrument could help to keep satisfied patrons.

Again, as in years gone by, the "horrible" tariff and classification situation was scored. Things actually are getting worse instead of better, said one of the papers on this subject, and the tariffs are "a constant source of irritation, if not friction . . . . between shippers' and carriers' rate clerks." Following this paper, a resolution was adopted that "it is the consensus of the freight agents assembled at this annual session that a more vigorous and aggressive program with respect to tariff simplication must be progressed by the carriers." This was followed by a moment of silent prayer for the rate makers.

In speaking of dependable service, one paper said that railroads should arrange connecting line schedules to assure fast service. The writer recognized the difficulties inherent in this task but suggested that each railroad should keep in mind the fact that "it is the trucking industry with which it must compete rather than the adjoining railroad."

COMMITTEE ON STATION OFFICE OPERATION

H. A. FREEMAN
Agent, Grand Trunk Western, chairman

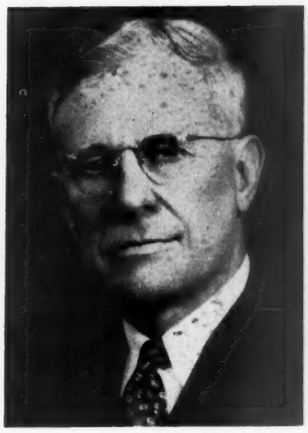
The agents from Kansas City, Mo., presented a paper with the theme, "there must be some better way to handle station and terminal car records than the way we're handling them now." The report asked consideration of the "possibilities of a master perforated card record on each car entering a terminal, this card to serve as a general car record, and from which machine-made interchange reports, switching abstracts, per diem reclaims and traffic reports could be completed. Perhaps such a system could be tied in with station accounting procedures." The paper then went on to suggest that a research subsection of the Freight Station Section be set up to work with operating and accounting departments and office machine manufacturers in developing new methods and procedures for doing railroad office work.

Another paper suggested that, to avoid instances where stop-off cars slip past the stop-off point, the railroads should consider the advisability of billing such cars to the stop-off consignee or consignor rather than to the final destination. It was pointed out that accounting rules do not permit this. It was argued, nevertheless, that several roads are now doing exactly that, and that the results are very good.

A paper prepared by the agents at Montgomery, Ala., said that switching receipts, which shippers must obtain from the switching line before the road-haul carrier can give the shipper a signed bill of lading, are the cause of considerable diversion of traffic. Since, in most cases, it was asserted, the agent of the switching line, when he signs the receipt, actually does not know the car is loaded and ready to move, this paper suggested that the practice of requiring the shipper to get such a receipt be discontinued.

Circuitous routings were condemned in several papers and sentiment was very strong that all roads examine routings on l.c.l. particularly in order to eliminate such time-consuming routes. It was recognized that much of this routing was done to give the billing road the long haul, but the feeling was that cutting out roundabout ways of getting freight to destination, with ensuing delays, would do a lot to regain shipper and consignee favor for the railroads.

John E. Tilford Assumes Helm of "Old Reliable;" James B. Hill Plans Retirement June 30



John E. Tilford

James B. Hill

Before a crowd of over twelve thousand persons gathered to celebrate the Louisville & Nashville's centennial of service, A. L. M. Wiggins, chairman of the road's board of directors, announced the voluntary retirement of President James Brents Hill. Although he will continue with the railroad in an advisory capacity and as a member of the board, Mr. Hill's retirement comes only after his compliance with a request of the board—made over two years ago—that he remain at the helm of the L. & N. until completion of the centennial celebration. (See *Railway Age*, February 10, page 47.)

His resignation, which will take effect on June 30, was handed to the board on June 7th, the day of the celebration. It was accepted, said Mr. Wiggins, with "mixed emotions" and under the conditions mentioned, and with the specific request that Mr. Hill continue to write his monthly messages to the railroad's 27,500 employees as he has done since 1934.

John Emil Tilford, present vice-president of the road, was chosen by the board to guide the railroad into its second century. An inveterate railroader who has spent his lifetime in the field of transportation, Mr. Tilford has accepted a larger and larger share of the administrative duties in the past year, earning the confidence of the board which chose him as Mr. Hill's successor. Associated with the L. & N. since 1920 with the exception of a nine-year period during which he served as chairman of the Southern Freight Association, Mr. Tilford assumed his present position as vice-president in April, 1945, and a member of the board of directors in 1946.

James B. Hill was born on November 14, 1878, in Spencer, Tenn., and attended country public schools and the George Peabody College, Nashville, where he graduated in 1898. In August the same year, he entered railroad service in the position of relief agent for the Nashville, Chattanooga & St. Louis at Bon Air, high in the Cumberland Mountains. Later he worked at Sparta and Tullahoma, studying shorthand at night until he was rewarded with the position of private secretary to the superintendent. In 1902 he went to Nashville, in the office of the Nashville & Chattanooga divisions, where he successively became a clerk, secretary to the superintendent and assistant chief clerk. In 1904 he transferred to the road's treasury department, in which he remained for the next eleven years to become appointed transfer agent and, in 1915, assistant secretary of the company.

During the period of federal operation of the railroads—December 1917 to March 1920—he served as chief clerk to a group of railroads (the N.C.&St.L., the Tennessee Central and the Birmingham & Northwestern) whose federal manager, W. L. Mapother, later became president of the L. & N. Upon return of the railroads to private management, president W. R. Cole of the N.C.&St.L. picked Mr. Hill as his chief clerk, and on Mr. Cole's death in March, 1926, Mr. Hill was elected to succeed him as president. On November 27, 1934, he was elected to the presidency of the L.&N., the "parent" of the N.C.&St.L., although his interest in the "Dixie line" remains today through his membership on its board of directors, a position he will retain after retirement. It is said that Mr. Hill served the L.&N. as president longer than any other man, with the exception of Milton H. Smith. His term of office, coupled with that as president of the N.C.&St.L., extends over a quarter of a century. In addition to his service on the board of directors of his two "home" roads, Mr. Hill is a director of the Atlanta & West Point—Western Railway of Alabama, a director and member of the executive committee of the Association of American Railroads and a member of the executive board of the Clinchfield.

John E. Tilford was born in Atlanta, Ga., in 1888.

(*Continued on page 76*)

"To Fellow Employees—"

A hall-mark of James B. Hill's tenure of office as president of the L.&N. has been his monthly message to the employees of the road. An excerpt from one of his typical messages is reproduced herewith:

"The railroad industry and railroad employees are in a different position than formerly when they had no competition. Unless we can furnish equal service at equal rates, the business and consequent employment we once had will pass to other forms of transportation. Railroad operating costs, therefore, cannot continue to increase—they should be lowered, improvements must be made and service made better. This is not a problem that management alone can solve. It can only be done with the understanding cooperation of employees, whose welfare as a group is at stake . . ." (May 1936).

C. I. Morton (above left), superintendent, Seaboard Air Line, Raleigh, N. C., newly elected president of the American Association of Railroad Superintendents. Fred Diegtel (center), superintendent, Delaware, Lackawanna & Western, Hoboken, N. J., retiring president of the association. "The railroads' policies are reflected through the superintendents," William White (right), president of the Delaware, Lackawanna & Western, stated at the Superintendents' Association luncheon

Division Bosses Look At Customers' Needs

Superintendents join to seek ways for bettering service and winning traffic by improved operating methods, safer handling of freight and more effective control of employees

The American Association of Railroad Superintendents met in its fifty-fourth annual convention at Chicago on June 6, 7 and 8 to discuss matters of current interest to railway operating officers, stressing means for providing better service to meet the competition. William White, president of the Delaware, Lackawanna & Western, addressed the superintendents and their guests at the annual luncheon on June 7. C. P. Fisher, general manager of the Chicago Union Station Company and a past-president of the association, opened the meeting with a "charge" to the superintendents, drawn chiefly from his long and practical experience as an operating man, which comprised personal judgments on the human relations between a superintendent, his supervisors and his men. There was a record attendance of 317 members, including officers from the railways of Canada, Mexico and Cuba, and 74 guests.

H. C. Marmaduke, representative, executive department, Illinois Central, presented an illustrated talk entitled "Super-Vision for Supervision," which will be the subject of an article in an early issue of *Railway Age*. On the afternoon of June 7, the superintendents traveled by special train over the Illinois Central to South Chicago; over the Elgin, Joliet & Western through the South Chicago and Gary plants of the Carnegie-Illinois Steel Corporation and through the industrial area bordering the south shore of Lake Michigan, and returned to the city on the New York Central.

President Fred Diegtel, superintendent of the Lackawanna at Hoboken, N. J., presided over the three-day meeting. C. I. Morton, superintendent of the Seaboard Air Line at Raleigh, N. C., was elected president of the association for the ensuing year.

"The customers of the railroads are entitled to the very best service that it is possible to provide, and at the lowest possible price," Mr. White declared in his luncheon address. The service they receive will determine whether they are advocates or adversaries of the railroads. Operating railroad men, he said, have a vital role in the business of meeting and surpassing competition. "We must serve our patrons as they would be served, and not as we would serve them." The Lackawanna president warned that good service must be well distributed around the country if it is to accomplish anything. "Good service cannot be achieved by a single division or district, or even a single railroad—it must be the policy of all the 132 Class I railroads which operate as separate units, yet as a single system."

Mr. White emphasized that the impression that the railroads are looking for sympathy must be avoided.

The American people don't want socialism, he said, and they are, therefore, already "thinking our way." The job is to point out the danger signs and make them aware that their self-interest demands an objective appraisal of the railroad problem. He advocated a square deal politically, and said that the railroads must be permitted to compete upon equal terms with other forms of transportation, adding that "encouragement is to be derived from the gradual awakening by public authorities, shippers, the press and the public to the seriousness of the problem [as evidenced by] the searching investigations now under way by both Senate and House committees into the heart of the railroad problem, and the more realistic approach by many state commissions to the subjects that we present to them." "The railroads have no desire to inflict more regulation upon their competitors," the Lackawanna president said, "except that which is necessary to equalize the terms under which we compete with them."

Mr. White declared that it is not necessary for the American railroads to "cry." "The United States," he pointed out, "has the best railroad system in the world, hauling passengers and freight for the lowest charges that exist and, at the same time, railroad employees in this country are paid about four times as much in wages as the next highest paid railroad people in the world."

Getting Car Efficiency

E. W. Coughlin, manager, railroad relations, Car Service Division, Association of American Railroads, outlined three basic ways of increasing car efficiency with a goal of savings approximating $200 million annually:

(1) *Heavier loading.* A conservative estimate, he said, indicates than an additional load of one ton in each carload would effect yearly savings in operating expense and car ownership of $28 million. Mr. Coughlin told of cooperation with a New England shipper toward increasing flour loads from 900 bags to 1,000 bags per car, an increase of five tons which reduced the number of cars needed to handle the traffic by 24 annually.

(2) *Observance of car service rules.* A 10 per cent saving in empty carmiles in 1948 would have cut operating costs by over $55 million.

(3) *Faster turn-around.* This involves prompt yard and road movement, prompt repairs, prompt loading and unloading and prompt handling of billing. Mr. Coughlin also referred to the "dirty car problem," pointing out the savings which would accrue if cars did not have to be switched to cleaning tracks. He urged that instances of incomplete unloading be reported promptly to the car efficiency committees of the Shippers Advisory Boards, or to the district managers of the Car Service Division.

Mr. Morton presented a progress report on proposed suggestions for modification of rules in "traffic control territory." It was voted that this subject be taken up with the Rules Committee of the Association of American Railroads, and that two members of the existing rules committee of the superintendents' association be appointed, if required, to work with the A.A.R. on suggested changes.

Election of Officers

Newly elected vice-presidents of the association are: H. E. Bixler, transportation assistant, New York, New Haven & Hartford, New Haven, Conn.; J. C. Starbuck, superintendent, Chicago, Burlington & Quincy, Chicago; and J. W. Harman, assistant superintendent, Canadian Pacific, Montreal, Que. F. L. Houx, superintendent, Chicago & North Western, Chicago, was advanced from fourth to first vice-president. D. E. Ferner, superintendent of transportation, Chicago South Shore & South Bend, Michigan City, Ind., was elected treasurer. Newly elected directors are: R. A. J. Morrison, superintendent, Baltimore & Ohio, Cumberland, Md.; E. C. Johnson, superintendent, New York Central, Matoon, Ill.; H. H. Clark, superintendent transportation, Erie, Cleveland, Ohio; G. H. Leilich, superintendent, Lehigh Valley, Buffalo, N. Y.; and W. H. Schmidt, Jr., western editor

The superintendents leave a special Illinois Central electric train and board the "air conditioned" Elgin, Joliet & Eastern at South Chicago for a trip through the South Chicago and Gary plants of the Carnegie-Illinois Steel Corporation. The New York Central brought the members back from Pine Junction (Gary), Ind., to Chicago

of *Railway Age*. J. A. Murphy, superintendent, Canadian National, London, Ont., was re-elected. A resolution was made recognizing the long and valued service to the association of Charles Layng, associate editor of *Railway Age*, retiring director, and it was voted that he be made a "member emeritus" of the executive council.

COMMITTEE REPORTS

WHAT CAN BE DONE TO MEET COMPETITION

CHAIRMAN, G. M. LEILICH
Superintendent, L.V., Buffalo, N. Y.

What can a division superintendent do to match and surpass the advantages of competitive transport and thus stem the tide of traffic diversion? In the paramount matter of rates, the committee said that the influence of the superintendent is felt in the improved efficiency of operation and the maximum utilization of technical advancements which result in a reduction of costs without a reduction of service. In the establishment of commodity rates, particularly on seasonal traffic, prompt and expeditious assistance to the traffic department in furnishing cost data will permit the acceptance of immediate traffic which will not wait for lengthy exchanges of views.

The railroads depend on their superintendents to meet the dependability of their competitors—particularly in handling l.c.l. traffic. Solid cars must be loaded to eliminate every transfer possible—both to expedite the freight and to reduce claims and handling costs. Since the establishment of the 40-hour week, l.c.l. service has deteriorated, the committee found. Consideration should be given to reverting to the six- and possibly the seven-day week at certain points, with the elimination of the early-in-the-week extra gangs which now attempt to take up the slack from the week-ends. An intensive study must be made of l.c.l. handling methods, with particular reference to the operations of pick-up and delivery draymen, prompt loading and unloading of cars, the plan of switching house cars, the "blocking" of outbound cars on trains, the reduction of loss and damage and many other allied subjects.

The committee pointed out that, dependent somewhat on individual railroad policy, the superintendent can increase the flexibility of l.c.l. freight service by such means as an extensive pick-up and delivery service, and the substitution of over-the-road trucking for local, or way car services. This latter often results in a double saving—crew costs and the costs of per diem. He can recommend the acquisition of special handling devices where there is sufficient traffic potential. Flat cars equipped to handle truck trailers and various types of slide-off containers can be used to advantage in a number of specified conditions where direct rail service is either impractical or impossible.

Cooperation with other railroads at junction points often can eliminate delays which become cumulative en route, and the establishment of so-called "interdivisional" runs, eliminating the change of cabooses and the stopping of trains at intermediate yards, are factors of importance toward the goal of dependability. It is easier to foster such improvements than it is to regain lost traffic.

Improvements in motive power have not been matched by improvements in freight terminal layout, the report stated. The superintendent must call the attention of management to terminal bottlenecks and be in a position to make recommendations as to improvements. Cooperation with connecting lines in the matter of preclassification of cars for interchange is effective in overcoming individual terminal bottlenecks. Better mechanical inspection at initial terminals often can eliminate delays for inspections en route.

The superintendent must be in a position to make recommendations to management on the question of motive-power improvement, the installation of centralized traffic control and other time- and cost-saving devices. He must maintain discipline within his organization to keep loss and damage at a minimum with the goal of reducing crating and packing requirements to those of competing transportation.

Operating personnel, agents and others must be schooled in "traffic mindedness." The superintendent can accomplish this partly through personal contact and partly through such group devices as company magazines, union meetings and employee rallies.

The superintendent must keep an eye on public relations, the committee said. Through participation in the activities of civic and service organizations, he can direct attention to the need for transportation equality and a national transportation policy, and at the same time, stress the railroad's local contributions—such as school taxes and local employment. Judicious use of cab permits to qualified passengers, shippers or friends on roads where passenger trains are Diesel-powered, will often give the selected person a new railroad "outlook" and possibly result in additional traffic. Pilots' cabin riding is a device commonly used by air lines. Every effort of a superintendent must be directed toward maximizing these inherent advantages and making railroad transportation the cheapest, the most dependable, the fastest and the most desirable mode of transportation for both freight and passengers.

Despite the proclaimed advantages of its competitors, the committee declared, the railroad remains the only truly *common* carrier. It performs freight service at the lowest *actual* cost. Rail service includes specialized handling, tracing service, diversion privileges, and the use of storage facilities—all of which are coupled with a greater financial responsibility and a greater ease of interchange between carriers.

EXPEDITING MOVEMENT OF FREIGHT TRAINS THROUGH YARDS

CHAIRMAN, W. B. SALTER
General Manager, Toronto, Hamilton & Buffalo, Hamilton, Ont.

The measure of a yard's size by its storage capacity, this committee reported, "has rightfully given way to the new yardstick of handling capacity." The committee considered yards and terminals as the principal bottleneck to further acceleration of overall service, and looked for real improvements through modernization of these facilities.

The committee discussed the importance of facilities for main-tracking of trains blocked through, and the relation of engine-dispatching facilities, yard offices, caboose tracks and repair tracks to insure unimpeded access to running tracks. One yard modernization was described wherein a hump and retarder installation had resulted in the reduction by an estimated 1 hr. 40 min. in the average time required to move loaded cars through the terminal, and a reduction of 10 hr. in the detention time on empties—savings which should total nearly 200,000 car-days annually. A second such installation, which was speeding up freight service as much as 30 hr., was described.

A further refinement for hump and retarder yards—push-button control—was described as "a major stride in expediting the movement of cars through terminals." Modern communications create the possibility for classifying more cars per shift, it was developed, and as an example, one road was cited which had achieved a 50 per cent saving in car efficiency through the use of "walkie-talkie" units by car checkers. The number of cars classified per engine-hour can be increased, the committee declared, through use of radio, which provides an instant voice link between supervisory forces and crews to relay operational information,

It is the consensus of the superintendents that improvements to yard facilities, commensurate with those accorded main track, contribute importantly to overall performance in freight service

changes in instructions, reports of mechanical failures or any irregular situations.

The committee felt that efforts should be made to handle yard entrance switches by remote control, and the use of track indicators designating tracks to be occupied by arriving freight trains, especially where the yard offices are at distant points. Photographic processes are speeding yard clerical work, improving accuracy and providing better record information faster. Punch cards with waybill information are eliminating detention of trains for billing. The transmission of this information by teletypewriters is giving forces at receiving points more time to plan the work to be done on incoming trains.

Recent development of highly mechanized, self-propelled icing machines, the committee reported, promises better service for shippers of perishables. Operating practices mentioned which should speed service—their feasibility being subject to local conditions—include completion of set-outs prior to "blue-flagging" trains for inspection; outbound train inspection so as to take care of defects which may have developed during classification; segregation of loads and empties at repair tracks; and the continuation of loaded cars due for air-cleaning.

In discussion following the report, one superintendent urged that a *real* automatic coupler be designed; not one on which the knuckle has to be opened manually before a coupling can be made. Another expressed the hope that t mechanical departments will design a quick-release feature for car brakes so that trains can be switched immediately upon arrival.

SAFETY IS OF THE FIRST IMPORTANCE IN THE DISCHARGE OF DUTY

E. G. KIESELE
Terminal Superintendent, Chicago, Milwaukee, St. Paul & Pacific, Chicago

"Safety should be the foundation of all our thinking and planning in any undertaking," this committee declared, and "should be the fundamental principle guiding every phase of our activities in the operation of the railroads." Proper support from the "top" is required for an effective safety program—"it is a joint function of management, the supervisors and the employees."

The committee observed that transportation employees in train and engine service had the highest casualty ratio and the lowest percentage of decrease in casualties per million man-hours—a decline of 50 per cent in 25 years as compared with a 73 per cent decline in casualties to all classes—but refused to concede that it is not possible to work as safely in train and engine service as in other departments. The proper selection of employees and adequate safety training were considered of primary importance—"the urgency of getting men started promptly on important jobs does not excuse adequate attention to proper safety instruction." The supervisor was credited with holding the key to the whole safety problem, and success in safety programs was related in large measure to the effort and energy devoted to them by him. The supervisor must be able to simplify safety so that it can be easily understood, the committee stated, and he should check personally to see that the performance of his forces is in accordance with the best safety standards.

While meetings were described as desirable—particularly with the use of visual aids and slow-motion movies—the committee felt that the meetings are attended chiefly by those already safety conscious; hence the need for personal contact with employees on the job. R. A. J. Morrison, superintendent of the Baltimore & Ohio, Cumberland, Md., told how his road had partially overcome the difficulty of reaching the train and engine service employees by issuing daily telegrams with safety messages—such as "Make this a safe trip"—for delivery to train crews at the start of their initial runs.

Mr. Morrison also stated that he had found it well worth while checking the prior safety records of new employees through their former employers.

A representative of the New York, Chicago & St. Louis—1949 winner in its class of the National Safety Award—described a program in which a safety slogan originated by the employees themselves was "broadcast" by yardmasters every hour, 24 hours a day, over yard radio installations. The engine crews are required to acknowledge receipt of the messages. A New Haven officer advised that his road was sending out safety reminders on yard loud speakers.

A train master of the Elgin, Joliet & Eastern told how his road had a 50 per cent reduction in personal injuries after a contest program had been inaugurated. Drawings are

held for new automobiles on each division once a year, but a reportable lost-time accident causes withdrawal of that employee's name. Mr. Fisher said that he could make every employee "an animated safety poster" with a 2½-cent button. One road pointed out that it had success in getting employees to wear safety shoes by buying them in quantity lots and selling them to the employees at wholesale less $1. A Sinclair Refining Company movie, "Miracle of Paradise Valley," was highly recommended for safety meetings.

EFFECTIVE USE AND INTERPRETATION OF STATISTICS

CHAIRMAN, J. L. BARNGROVE, Jr.,
Superintendent of Car Service, New York, New Haven & Hartford, New Haven, Conn.

The importance of operating statistics, even though many of them may appear to have definite limitations when used for a particular portion of a road, must be reckoned with in the light of the fact that a poor showing might cause an adverse decision by a regulatory body, or unfavorable action by an investment interest, the committee pointed out.

One statistical item not generally used is gross ton-miles per train-hour per dollar of wages, a computation which the committee thought might be useful in obtaining a more accurate idea of the financial result of performance; for example, elimination of overtime in crew wages would reflect favorably in this index. Stops per 100 train-miles was outlined as a useful measure of the effort to keep road trains in motion.

Recent developments in mechanized methods of handling statistics through punched cards have made it practicable to issue statistics more frequently, more nearly currently, and in greater detail, the committee reported, mentioning one road which used to issue train-loads, average-speed and gross-ton-mile figures only for each division and for the system, which now issues the same figures weekly for each train, with appropriate subtotals for operating districts and a grand total for the system, contributing to a closer control of train operations.

In discussing the report overemphasis on statistics, *per se*, was deplored, and examples were cited where improved statistics could easily be obtained through less efficient and hence more costly, operating methods. The concensus was that all statistics should be considered in the light of cost per 1,000 gross ton-miles. Members similarly admonished against interdivision statistical comparisons on account of the wide variance of factors affecting different districts.

S. M. Gossage, assistant manager of personnel, Canadian Pacific, described the effective use of "locomotive capacity-miles," or "tractive effort-miles," to determine how efficiently power is being used, and to prevent its missuse. G. M. Leilich, superintendent, Lehigh Valley, thought that in view of the intense competitive situation, locomotive-miles per day was perhaps the best index of the utilization of power.

NEW DEVELOPMENTS IN FIGHTING WEATHER

CHAIRMAN, H. S. SYMON
Superintendent of Passenger Service, Illinois Central, Chicago

Methods to keep the railroad an all-weather transportation agency were discussed by this committee, which emphasized that preparations before winter sets in are often more important than the actual physical handling of snow and ice. Advance planning suggested was erection of snow fencing at locations where previous experience shows that snow drifts badly; the use of permanent metal snow fences which are also stock proof; and the planting of trees at strategic spots. Thorough cleaning and ditching to provide adequate drainage and room for snow thrown off the rail—a job at which off-track machinery has proved effective—was commended.

New and useful types of plows which can be operated on rails or on highways were described. Bulldozers, the committee reported, can be used in moving snow, in feeding melting pits, and opening roadways and teamtracks, while smaller units can be used with tractors around freighthouses, baggage rooms and station platforms. This equipment is used year around, of course, by the maintenance department, and need only be pressed into snow fighting in emergencies. Several kinds of switch heaters, including remotely controlled propane gas heaters, were credited with excellent results.

The committee reported that on one railway it has been the practice—when maintenance-of-way work requiring air compressors is finished—to ship them to terminals and set them up in strategic locations. Pipes are laid in the vicinity with outlets at switches, and during storms snow is blown out from around the switches by two men using a short length of hose attached to the outlet.

The education of section forces in reporting local conditions should be encouraged, it was stated. Attention was called to the short range forecasting of the "Krick Service" in Los Angeles to which several railroads subscribe with satisfactory results. Local power companies are usually in a good position to furnish information on sleet conditions. It was recommended that state authorities be contacted to interest them in cleaning flangeways on railroad crossing over which they operate plows.

In discussion of the report, particular praise was given the bulldozer as a snow weapon. A Canadian Pacific superintendent described a condition of 13 snow slides over five miles of line which old-timers estimated would take five days to clear. Bulldozers were employed for the first time in that area, and five of them had the line cleared in less than 24 hours.

A report on "The Superintendent's Responsibility for Effective Discipline" by Chairman D. Campbell will receive comprehensive treatment in an early issue of Railway Age.

The chairman of the Canadian Pacific, George A. Walker, K.C., of Montreal, Que., received an honorary degree of Doctor of Laws from Chancellor George Montgomery of Bishop's University during the university's annual convocation at Lennoxville, Que.

Advises Supreme Court to Dismiss Georgia's Complaint Against Railroads

Special Master Lloyd K. Garrison files report finding that state was not qualified to bring case; sees some "unlawful" rate-making activities, but calls evidence of damage "too shadowy" to warrant further entertainment of suit

Dismissal by the United States Supreme Court of Georgia's anti-trust complaint against 20 eastern and southern railroads has been recommended in the report of the special master, Lloyd K. Garrison, whom the court appointed to hear the case. The recommendation was based on Mr. Garrison's "conclusions of law" to the effect that Georgia had failed to meet tests set up in section 16 of the Clayton Act to qualify a party, other than the federal government, for the role of plaintiff seeking injunctive relief in an anti-trust case.

Meanwhile, however, the special master considered the possibility that the court might be inclined to reject the dismissal recommendation on the basis of a determination that some of the report's "findings of fact" supported "a conclusive presumption of injury to Georgia's economy, sufficient to entertain her suit." As to that, the master told the court that he regarded the evidence of damage "too shadowy and hypothetical to warrant such a presumption."

Found Some "Unlawful" Activities

The findings of fact which Mr. Garrison there had in mind were conclusions to the effect that a portion of the defendants' rate procedures, including activities of the Association of American Railroads in rate matters, were unlawful. His advice to the court, if it continued to entertain the complaint, was that such matters should not be determined finally until there were final determinations on pending Bulwinkle-Act applications of the eastern and southern roads, and on the so-called Lincoln case. The latter embodies the Department of Justice's anti-trust complaint against western roads and the A.A.R., which is pending in the federal court at Lincoln, Nebr.

Mr. Garrison's report was filed with the clerk of the Supreme Court on June 12. It was received pursuant to the court's June 5 order which provided for that procedure and stipulated that exceptions and objections of the parties, if any, should be filed within 90 days thereafter. (See *Railway Age* of June 10, page 80.) the Report was in three volumes, totaling 923 pages, and a 22-page abstract of its principal points was issued with it.

Georgia's suit was initiated by its former governor, Ellis Arnall, in 1944 and, in 1945, the state filed the amended complaint which became its charge against the eastern and southern roads. The Supreme Court assumed original jurisdiction by a 5-to-4 decision of March 26, 1945, the case being docketed as No. 10, Original (see *Railway Age* of March 31, 1945, page 584). On December 17, 1945, the court announced its appointment of Mr. Garrison as special master to take evidence. The appointing order directed the special master "to find the facts separately and state separately his conclusions of law thereon, and to submit the same to this court. . . . together with a draft of the decree recommended by him." The master's findings, conclusions, and recommended decree, the order added, "shall be subject to consideration, revision, or approval by the court."

The Defendants

The 20 defendants include 12 eastern roads and 8 southern lines. The eastern roads, or "northern defendants," as they are called in the proceeding, are: Pennsylvania; Baltimore & Ohio; Chicago & Eastern Illinois; Chicago, Indianapolis & Louisville; Cresapeake & Ohio; Erie; New York Central; New York, Chicago & St. Louis; Norfolk & Western; Richmond, Fredericksburg & Potomac; Wabash; Western Maryland. The involved southern roads are: Atlantic Coast Line; Carolina, Clinchfield & Ohio; Illinois Central; Gulf, Mobile & Ohio; Louisville & Nashville; Nashville, Chatanooga & St. Louis; Seaboard Air Line; Southern.

The A.A.R. is not a defendant, but its activities are

involved to the extent that they have been part of the defendant's rate-making procedures. Mr. Garrison rejected contentions of the C. & O. and Nickel Plate that they should be dismissed as defendants on the principal ground that they had "withdrawn" from the A.A.R. effective January 15, 1947, thus severing their connections "with the only activities alleged to be violations of the anti-trust laws."

"I have concluded that separate consideration need not be given the case of these two railroads," the special master advised the court. He added: "If membership in the Association of American Railroads should be found to warrant injunctive relief, withdrawal from the Association in the midst of the proceedings ought not, under the circumstances, to preclude the granting of injunctive relief."

As Mr. Garrison pointed out in his summary, Georgia is suing in its capacity as *parens patriae* (guardian of its citizens). Its original complaint sought from the court a decree equalizing all rates between Georgia and points in Official Classification territory with rates between points in that territory for like commodities on a mile-for-mile basis. That complaint charged that the I.C.C. was "condoning" the fixing of unlawful rates by the alleged conspiracy."

The Complaint

The amended complaint on which the suit is now based seeks no relief against rates as such. It is directed solely against the practices and set-up of the defendants' rate association. In its decision accepting original jurisdiction, the Supreme Court construed the complaint as charging "a conspiracy among defendants to use coercion in the fixing of rates and to discriminate against Georgia in the rates which are fixed."

The complaint's specifications include five main charges as follows: (1) That the conspiracy was effectuated through coercive rate associations; (2) that the purpose of the conspiracy was to give northern producers an advantage over southern producers; (3) that northern roads used coercion on the southern roads in the fixing of joint through rates; (4) that the defendants have fixed rates which are unjust and unfavorable to Georgia; (5) that the conspiracy has injured the economy of Georgia.

Summarizing Georgia's prayer for relief, Mr. Garrison said the state seeks an injunction, the effect of which would be "to exclude the A.A.R. from anything to do with rates, and to strip the defendants' territorial associations, with their five structural layers corresponding to the hierarchial authority of railroad rate officials, down to a single-layer public conference in each territory." Under such a set-up, a railroad proposing a rate change could, if it wished, submit its proposal once for discussion, but "all agreements about rates, except between the parties to a joint through rate, would be prohibited."

The master noted that the defendants have filed with the I.C.C. Bulwinkle Act applications for approval of rate procedures "basically similar" to those attacked by Georgia. He also noted, however, that no application covering the A.A.R.'s set-up has been filed. The Bulwinkle Act (now section 5a of the Interstate Commerce Act), which grants immunity from anti-trust laws to parties entering rate procedures agreements approved by the I.C.C., was enacted after Georgie's complaint was filed. As to the act's effect on the present case, Mr. Garrison's only specific observations were those pointing out that it does not give the I.C.C. authority to find that an agreement violates or does not violate anti-trust laws; and that the commission's approval of an agreement simply relieves the parties from the operation of those laws in carrying out the agreement.

"Beyond noting this one rather obvious fact," Mr. Garrison continued, "I have concluded that it would be inappropriate for me to attempt to anticipate or comment upon the questions which may confront this court under section 5a at the time when it is ready to act upon Georgia's case. For at that time the applications for approval of the Eastern and Southern agreements may or may not be still awaiting commission action, and if commission action has by then been taken it may or may not have resulted in approval of the agreement, and proceedings for judicial review may or may not then be pending.

"Moreover, many parties who are parties to section 5a proceedings but not to Georgia's case, as well as other agencies of government, may have an interest in and be entitled to be heard at the proper time upon the various questions of interpretation and application of section 5a which are bound to arise. Meanwhile, I consider it my plain duty to the court, as well as to the parties, to report fully upon the merits of the case which the court has referred to me."

No "Conspiracy" Found

Proceeding on the latter basis, the special master made 295 separate findings of fact. The "principal" ones he summarized in his abstract, dealing first with the alleged conspiracy.

"No conspiracy such as Georgia pictured was established," he said. "No sectional discriminations or intent to discriminate against any region, or to freeze the rate structures, motivated the creation of the A.A.R. The A.A.R. was a product of the depression of the '30s. It was formed by the railroads with the knowledge and to some extent with the cooperation of important railroad investors, but not at their dictation or under their direction.

"It was created to find ways of reducing railroad costs and increasing railroad revenues. Its objects, among others, were to avoid competitive wastes in service, to combat proposals for government ownership, to bring about adequate government regulation of competitive forms of transportation, and to deal at the national level with rate questions of importance to the industry. Prior to the establishment of the A.A.R., the federal coordinator of transportation (Joseph B. Eastman) had been urging the railroads to 'form a more perfect union,' and the I.C.C. had been urging them to take concerted action to conserve and augment revenues."

As to the relationships of the A.A.R. and the territorial associations, Mr. Garrison found that the A.A.R. has dealt with rate questions "only intermittently." He explained that the association has "occasionally" passed resolutions addressed to members, "laying down policies designed to discourage rate reductions or to bring about increases." "More often," the association's Traffic Department "has sought to accomplish these objects in informal conferences in particular situations of large importance from a revenue standpoint."

But it is in the defendants' territorial rate associations, "not in the A.A.R.," the summary continued, "that the day-in and day-out business of adjusting interterritorial rates takes place." The establishment of the A.A.R., it was also noted, "did not bring about any change in the structure or procedures of the territorial rate associations, whose existence long antedated that of the A.A.R." However, the southern defendants were found to have been "to some extent stimulated by the A.A.R." when they adopted rate-procedure changes designed to "discourage the making of unnecessary rate reductions."

Role of A. A. R.

Meanwhile the A.A.R.'s role in rate matters was described as one which put the association "in the railroad world as an overall influence on the side of conserving revenues through the avoidance of unnecessary rate reductions." "This influence," the summary added, "is exerted without sectional bias or discriminatory procedures. It is non-coercive, but it helps to fortify the purpose of the territorial rate associations to check rate erosion."

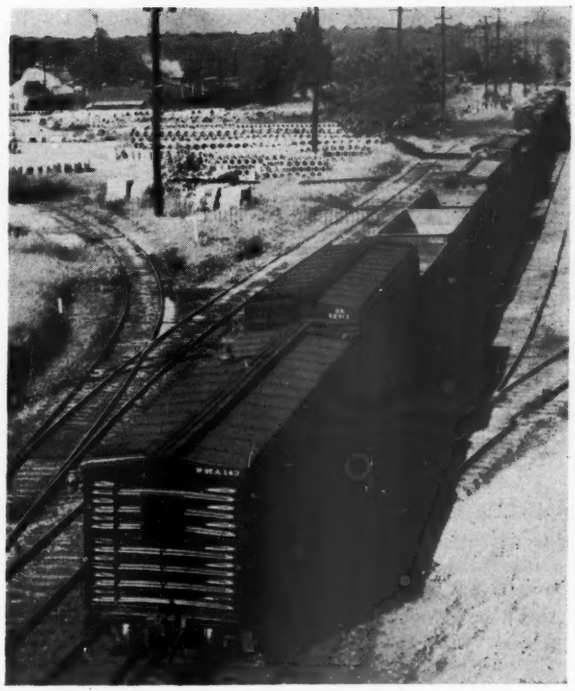
As to the rate activities of the territorial associations, Mr. Garrison found that they, too, are "non-coercive and non-discriminatory." At the same time, however, he found that they have been something more than "forums for the discussion of rate proposals." The defendants, he explained, "have agreed upon procedures and structures which are designed to check the scope and frequency of rate reductions." He conceded that the involved agreements and understandings "do not destroy the right of independent action," but added that "to some extent they dampen down the frequency of its use and serve as a deterrent, self-imposed and non-coercive, to the freedom of rate-making."

This brought the special master to his consideration of the question of whether "this deterrent" operated, as Georgia charged, "to freeze a discriminatory rate structure." Dealing first with the class-rate structure, Mr. Garrison noted that most freight moves on commodity rates. He nevertheless held that the class-rate structure was of economic importance, because class rates must be utilized by shippers who fail to obtain commodity rates. He then went on the find that I.C.C. decisions of recent years, principally in the No. 28300 Class Rate Investigation, had "considerably rectified" the "substantial discrimination" which the class-rate structure formerly reflected in favor of Official-territory shippers.

Would Leave Class Rates to I.C.C.

With respect to "remaining class rate discrimination, Mr. Garrison said the only feasible way to remove it was to await installation of the uniform classification ordered by the commission in the No. 28310 case, and of the uniform class-rate scale scheduled for installation at the same time. Thus he turned to the commodity-rate set-up to see if the situation there would sustain Georgia's charge that the rate associations operate to "freeze" a "discriminatory" rate structure.

Commodity rates, as Mr. Garrison put it, "do not constitute a true structure"; they are "strictly opportunistic, worked out on a case-by-case basis." He thought it "probable" that northbound interterritorial rates might average mile-for-mile "slightly higher" than Official-territory rates on like commodities. He added, however, that this situation "cannot fairly be regarded as in and of itself an injury to the South," since "there is no evidence to show, and no rational basis for presuming, that the existence of the probability has had any effect upon the choice of localities, as between the South and the North, by producers."



Atlanta & West Point local freight followed by a Western of Alabama caboose

"The possibility that commodity rate differentials are causing a loss of profits to southern shippers is too speculative to warrant a finding of injury, real or presumed," the summary added.

In view of the foregoing findings, the master concluded that the only ground on which Georgia can assert an injury, not equally suffered by the North, "is that (since the northbound volume of shipments greatly exceeds the southbound) the deterrent effect applies to many more proposals for rate reductions addressed by the South to the North than by the North to the South." Mr. Garrison put at not more than "a couple of dozen a year" the number of rate-reduction proposals from Georgia to the North which have been disapproved. And he had "no way of telling" whether these disapproved proposals affect many of Georgia's producers or few; whether much or little traffic is involved; or what proportion of them would be concurred in "if there were no rate association deterrents to independent action."

Thus the master's first conclusion of law, holding that Georgia had not established the claims to injury which it asserted in its complaint and which were

necessary to entitle it to seek the aid of the court. He explained that, under section 16 of the Clayton Act and applicable court decisions, a plaintiff, other than the United States government, is not authorized to seek injunctive relief unless such plaintiff shows either: (a) That loss or damage to the plaintiff is threatened by acts, violating the anti-trust laws, which are aimed and directed at the plaintiff, or at a special class of persons of whom the plaintiff is one, or (b) that the threatened loss or damage to the plaintiff is a direct injury differing from that suffered by the public at large.

The master concluded that Georgia had not met test (a), because, as the summary put it, "the evidence did not show that the activities of the defendants' rate associations, including the A.A.R., were aimed and directed at Georgia, or at the South including Georgia." Neither, he also concluded, had test (b) been met, because, "viewed in the large, the evidence pictured simply a nationwide and largely unsuccessful effort on the part of the railroads, through their associations, including the A.A.R., for revenue purposes and without sectional bias, to discourage rate reduction; an effort whose economic effects upon the public at large appeared to be so generally diffused that no state . . . was in a position to show that its particular segment of the public suffered therefrom in any way peculiarly different from that of the public generally."

Then came the recommendation that the court enter a decree dismissing the complaint. It was followed by the master's consideration of the possibility that the court might reject the recommendation and find that Georgia had proved her standing to sue as *parens patriae*.

Then, Mr. Garrison continued, it would be necessary to consider the extent to which the defendants had violated the Sherman Act. He went on to call "price-fixing agreements," and thus unlawful under the Sherman Act, those portions of the defendants' rate-making procedures which extended beyond "mere discussion and exchange of views." And he placed in the same category some A.A.R. practices that are "authorized or engaged in" by the defendants in their roles of A.A.R. members.

Decree Now Would Be "Premature"

As to the practice of the territorial association, the master, as indicated above, advised the court that, because of the pending Bulwinkle-Act applications, it would be "premature" to formulate at this time a decree dealing with such practices. Moreover, he also advised, that the effects of some parts of the decree sought by Georgia "would not be practical or consistent with the purposes of the Interstate Commerce Act."

The condemned A.A.R. practices were listed in the summary as follows: "Resolutions designed to preclude the adoption of particular rate reductions; resolutions not adopted under the aegis or at the prompting of the I.C.C. in connection with some pending proceeding before the I.C.C., designed to bring about rate increases applicable to some particular commodity; efforts of the A.A.R.'s Traffic Department, with or without the backing of resolutions, to induce particular roads to agree to refrain from rate reductions or to agree to make rate increases; and actions designed to promote procedural changes in territorial associations to check rate erosion."

After setting out that situation, however, the master proceeded to indicate "impediments in the way of issuing an injunction at this time against the defendants' participation in the A.A.R." He said that Georgia, having "failed to establish coercion or discrimination or threatened injury to Georgia in the set-up of the A.A.R.," would have "no standing" to seek an injunction against the A.A.R., except as it could "connect the A.A.R.'s activities with those of the territorial rate associations."

But, Mr. Garrison said again, the latter activities are involved in the Bulwinkle-Act proceedings; and if they should finally be sustained in those proceedings, Georgia's "only basis for injunctive relief against the A.A.R. would disappear." The master also suggested that a decree enjoining the defendants from participating in "unlawful" A.A.R. activities would result either in withdrawal of the defendants from membership in the association, or effectuation by the defendants of a "redoing" of the A.A.R. set-up.

"Either step," Mr. Garrison continued, "would adversely affect the interests of the majority [of A.A.R. members] without their having been heard." This "difficulty," he added, is not present in the Lincoln case where the A.A.R. is a party defendant. Thus his recommendation that the court delay until that case is "finally concluded" any action with respect the A.A.R. which it might be inclined to take in the present case.

JOHN E. TILFORD AND JAMES B. HILL

(*Continued from page* 67)

He entered railroad service in the traffic department of the Atlanta, Birmingham & Atlantic, and at the time of the installation of federal control he was serving as a traffic officer in the road's office at Atlanta. After the advent of federal control, he also served at the same time as assistant general freight agent for a half dozen other roads, and as chairman of the general routing committee (southern region) of the United States Railroad Administration. In March, 1920, upon return of the roads to private ownership, he was appointed general freight agent of the A.B.&A. (now a part of the Atlantic Coast Line) and in May of the same year, he was appointed assistant to the freight traffic manager of the L.&N. at Louisville. He remained in this capacity until March, 1928, when he was elected chairman of the Southern Freight Association at Atlanta. While serving in that capacity, he also served as chairman of a joint conference of railroad officers handling traffic and rate problems inter-territorially between railroad associations east of the Rocky Mountains.

In February, 1937, Mr. Tilford returned to the L.&N. as assistant vice-president at Louisville. Subsequently he was elected vice-president in charge of traffic and then executive vice-president in 1945, he has been a member of the board of directors since February, 1946.

GENERAL NEWS

The Brethren Don't Like Donnell's Bill

End hearings on anti-strike bill

The American Federation of Labor and its affiliated unions stand "unalterably opposed" to the Donnell anti-strike bill, William Green, A.F. of L. president, told a Senate subcommittee on June 12. The subcommittee heard Mr. Green as its final witness on the pending bill and hearings have been recessed. Earlier, on June 7, the subcommittee heard Harry See, national legislative representative of the Brotherhood of Railroad Trainmen, condemn the Donnell bill as "wholly unwarranted, unjustifiable, and unnecessary." Mr. See said the legislation would force labor into a straightjacket and "would make a mockery of the right of collective bargaining."

The pending bill (S. 3463) was introduced April 21 by Senator Donnell, Republican of Missouri. It would amend the Railway Labor Act to outlaw strikes or lock-outs and would provide for compulsory arbitration of wage or working rules disputes. At the hearings, conducted by a subcommittee of the Senate committee on labor and public welfare, railroad officials have endorsed the "principles" of the bill. Labor organizations have unanimously opposed it.

Mr. Green declared that passage of the bill would "promptly and completely destroy the voluntary arbitration machinery through which peaceful, friendly and cooperative relations have been built up by labor and management over a period of years." He went on to say that without free collective bargaining there can be no true industrial peace, and that compulsory arbitration "leads directly to, and in fact constitutes, totalitarianism."

"Insult to Union Members"

He said there is "no warrant in the record or in past experience and history" which indicates railroad labor-management relations will reach a stage where the national economy is vitally affected, and he added that it was a "gratuitous insult to union members" to assume they would deliberately bring about "the horrendous situations envisaged by some of the sponsors of this bill." In a "memorandum" which he presented with his statement, Mr. Green discussed the "constitutionality of compulsory arbitration and anti-strike legislation," and said it would be "highly questionable" whether the pending bill would be valid under the Constitution. He said a statute involving "unwarranted interference with the freedom of employers and employees to contract together about their affairs" would violate the due process clause and also expressed the opinion that compulsory arbitration might well be found to be contrary to the Thirteenth Amendment relating to involuntary servitude.

The statement by Mr. See was generally similar to testimony offered by other railway labor organizations in that it was designed "to register the serious opposition" of the B.R.T. to S. 3463. Mr. See discussed Adjustment Board problems and said the superimposing of court review upon the board's decisions "would destroy the usefulness" of the board. He said "certain carriers" have sought means of avoiding the effectiveness of the board, and declared the present backlog of First-Division cases "is attributable solely to the carriers' disposition not to accept its decisions as precedents, and the carriers' desire to find another means of solving these disputes."

In other sections of his testimony Mr. See said the bill's provisions are "more odious and more revolutionary than anything to which labor in other industries is required to submit," and its passage "would turn the clock backwards many decades."

"The compulsions embodied in S. 3463 are repugnant to the public interest," he said. Later in his presentation he added that "all-in-all we do not see any just basis for concluding that the Railway Labor Act has failed," and he urged the subcommittee to reject S. 3463 in its entirety.

Nancy Olson, Paramount screen star, opens the first of the new General American-Evans "Damage-Free" box cars. With Miss Olson are (left) E. S. Evans, Jr., of the Evans Products Company, and L. N. Selig, chairman of the board of General American

Justice Dept. Presents More Evidence in Reparations Cases

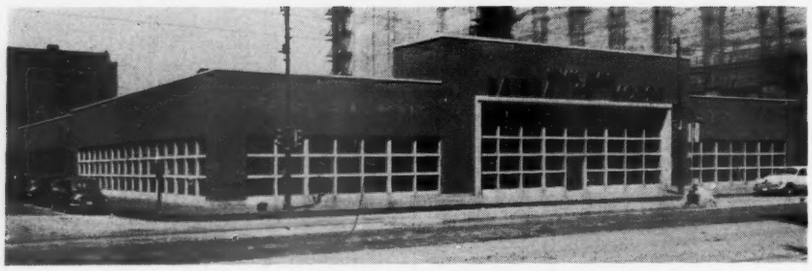
Division 4 of the Interstate Commerce Commission held a one-day hearing this week to receive, from the Department of Justice, evidence in support of the federal government's complaints in the third group of so-called reparations cases. The hearing was held on June 13 at the commission's Washington, D. C., headquarters with Commissioners Mahaffie, Rogers and Mitchell sitting as members of the division.

Three cases were involved. Like 14 other pending proceedings, they arose out of complaints whereby the government is seeking to recover alleged overcharges which it claims the railroads assessed on its shipments of various commodities during World War II. The commission has already concluded hearings on five of the other complaints (see *Railway Age* of March 25, page 64); and it has received (at a May 15-16 hearing) the government's evidence on a second group of four cases (see *Railway Age* of May 27, page 46).

Hearings Are Postponed

It was announced at the close of this week's session that hearing of government evidence on the five remaining complaints would be postponed from July 24 until September 25. This was suggested by the Department of Justice with the concurrence of railroad counsel, and the commission accepted the proposal. The new schedule calls for service of government evidence on the railroads by August 21. It also fixes January 16, 1951, as the date for hearing to receive the railroads' rebuttal evidence in the 12 cases awaiting such presentations. November 6 is the date by which the railroads must serve on the government their rebuttal evidence relating to the four cases on which the government offered its evidence at the May 15-16 hearing, and the three cases involved in this week's hearing. As to the five cases in which the government will offer its evidence at the September 25 hearing the railroads will have until December 18 to serve their rebuttal statements.

At this week's hearing, the Justice De-



This new structure, located on State street a few blocks south of Chicago's "loop," houses the Chicago branch office of Fairbanks, Morse & Co. and also a Diesel repair shop, a scale shop, a display floor and warehouse. The structure, which is 145 ft. wide with a depth of 245 ft., is built of pressed brick trimmed with Indiana limestone and is equipped with automatic heating and air conditioning

partment offered evidence embodied in 13 statements and several exhibits submitted by 10 witnesses. The three cases involved were Nos. 29853, 29920, and 29930, wherein the complaints assail charges paid by the government on its shipments of tents and tarpaulin, bomb-cluster adapters, and woolen blankets.

Generally, the government's evidence was calculated to show the assailed rates were higher than rates applicable on what its witnesses contended were like commodities with like transportation characteristics. Some witnesses were cross-examined briefly by carrier counsel who reserved the right to ask further questions at the September hearing.

At the close of the session, the Justice Department amended its complaint in one of the five proceedings to be involved in the September hearing. The case is No. 29761, wherein the complaint assails charges paid on shipments of airplanes and airplane parts. The railroads made no objection to the amendment, which attorneys for the Justice Department described as one that "narrows the issues," and is otherwise "simply explanatory."

Among other changes, the amendment puts into the complaint language which makes it clear the government is not assailing the level of transcontinental commodity rates applicable to shipments of airplanes and airplane parts moving on 6,000 lb. or 8,000 lb. minimum carload bases. It is also made clear that rates sought by the government in the proceeding are "basic," and "shall be subject to the general increases authorized in Ex Partes 162, 166, and 168."

Trucking Industry Continues Presentation to Senate Group

William A. Bresnahan, research director of American Trucking Associations, last week told the Senate's subcommittee on domestic land and water transportation that railroad presentations to the subcommittee included a "propaganda attack" against truckers "for the sole purpose of creating a smokescreen to mask real difficulties in the railroad industry." The subcommittee, headed by Senator Myers, Democrat of Pennsylvania, is a unit of the Senate committee on interstate and foreign commerce.

Mr. Bresnahan appeared at the June 9 session of public hearings being held by the subcommittee in connection with studies it is making pursuant to Senate Resolution 50. He continued A.T.A.'s presentation which had been opened at the June 6 session by the association's managing director, John V. Lawrence (see *Railway Age* of June 10, page 73).

The solution of railroad problems, Mr. Bresnahan said, "does not lie in punitive taxation and arbitrary regulation of competing agencies." He asserted that a question which needs the attention of Congress is: "What is *really* wrong with the railroads?" And he promised that trucking-industry representatives scheduled to appear at subsequent sessions would "fully explore" the matter.

Study Deterioration

Meanwhile, Mr. Bresnahan talked of studies indicating that weather and action of the elements are more important factors in deterioration of highways than operation of heavy trucks. Railroad proposals to increase taxes on trucks having a gross weight of 18,000 lb. or more, he said, amounted to proposals to impose "punitive taxation against hundreds of thousands of vehicles operated by farmers and private business concerns, as well as for-hire motor carriers."

The A.T.A. research director also submitted a booklet of pictures which showed large trucks operated by railroads and railroad affiliates. These, he said, were vehicles of the same type shown in the booklet entitled "Highway Freighters" which was submitted to the committee as part of the railroad industry's presentation.

The railroads, Mr. Bresnahan said, operate about 100,000 trucks "of all sizes, including some of the largest on the road." He added that they would be operating many more "except for certain anti-monopoly safeguards placed in the Interstate Commerce Act and other federal statutes by Congress." In that connection, he continued, "the railroads are hard at work in an effort to eliminate such safeguards, in the hope of taking over the trucking industry."

At the June 13 session of the hearing, several representatives of individual truck lines made brief statements urging amendments to the Interstate Commerce Act which would bring under regulation all movements of agricultural commodities and seafoods, except those owned by farmer or producer and moving to primary markets. One of these witnesses, P. M. Greenberg, vice-president of Werner Transportation Company, also made a second statement urging legislation to "prohibit the leasing of vehicles indiscriminately for one-way trips."

Electro-motive Guests Attend Opening of Exhibit

A tour of the Diesel-locomotive plant at LaGrange, Ill., and a dinner at the Stevens Hotel, Chicago, at which C. E. Wilson, president of General Motors, was the principal speaker, featured the formal opening of the Electro-Motive Division's exhibit at its plant titled "Blueprint for Better Locomotives," on June 13. The occasion marked also the attainment of a production rate of 200 Diesel units a month in March. Some 500 railroaders, newspaper men and business and civic leaders heard Mr. Wilson explain the five-year labor contract which General Motors recently negotiated with the representatives of its employees. Following closely his address before the National Press Club in Washington several weeks ago, the speaker characterized General Motors policy as one of doing that which "is right and fair for our employees and the corporation now and in the years ahead", rather than expediency and a short-range viewpoint.

The speaker stated that the agreement is based upon the following principles:

(1) It is logical, fair and reasonable to maintain the purchasing power of an hour's work in terms of goods and services the employee must purchase in his daily living.

(2) All Americans look forward to improving their condition.

(3) The way to advance a nation's prosperity is through science and technology.

(4) To produce more with the same amount of human effort through technological improvement is a sound economic and social objective that discards the false philosophy of make work.

(5) Insecurity worries people and it is right for a corporation to protect its employees.

(6) Cooperation and peace will best promote the prosperity of employees, the corporation, its customers, and the nation.

Mr. Wilson hailed the agreement of May 23 as the first time in which a big union subscribed to the principle of progress and technology.

C. R. Osborn, vice-president and general manager, introduced Mr. Wilson as the man who chose the original staff for E. M. D. Charles F. Kettering,

G.M.'s vice-president of research—who, according to Mr. Osborn "has been known even to talk to railroad presidents about the superiority of our product"—dismissed talk of shortages of oil with the statement that 95 per cent of the "country's fuel is still in the ground—of course, John L. Lewis has contributed much to this condition"—and added that "if you can't say that we are going to run out of something soon, you are not an economist." Observing that "there is an awful difference between a patent and a product," the noted inventor recalled how when General Motors first interested itself in Diesel-locomotives, he asked Mr. Alfred P. Sloan, Jr. for $500,000 with which to build a full-size experimental locomotive. G.M.'s chairman replied that it would cost much more than that to do the job. Mr. Kettering replied that he knew that, but moved under the assumption that "if you put up this much money to start it, you would certainly want to put up the rest of the money to finish it. . ."

The permanent exhibit is housed in a large room, 120 ft. x 60 ft. It comprises principally symbol explanations and working models of E. M. D.'s methods of design, manufacture, distribution and servicing. Among the exhibit groups are a mock-up cab of the company's latest high speed passenger locomotive, the E-8, complete with all controls and cab appurtenances.

Separate exhibit groups include: (1) "planned Dieselization for maximum economy"; (2) service department, including field organization, methods, instructions, and maintenance scheduling; (3) contrast between old and new ways of carrying out various production phases at E. M. D.; (4) repair services by E. M. D.; (5) the work of the company's public relations staff in "selling enthusiasm for railroad trains"; (6) distribution of parts; (7) continuous engineering development; (8) production control and purchasing; and (9) inspection.

Recommends 40-Hr. Week, 18¢ Raise, for Yardmen

A 5-day 40-hour basic work week for yard service employees has been recommended by an emergency board which made reports to President Truman on Thursday noon as this issue went to press. The board proposed that its recommendations take effect October 1, and that basic rates of pay for yardmen be increased at the same time by 18 cents per hour.

The latter would be less than the 20 per cent increase (about 28 cents per hour) proposed by the unions to maintain their present take-home pay, but the board said that the 18 cents, together with added opportunities for overtime at time-and-one-half after 40 hours would "serve to offset any substantial reduction in take-home pay." The board estimated that its award to the yardmen would cost the railroads $40,000,000 a year.

Buford to Resign as Milwaukee President: Kiley May Succeed

C. H. Buford, president, Chicago, Milwaukee, St. Paul & Pacific told the road's board of directors at a meeting on June 13 that he would resign from his post effective August 31, according to an announcement by the road on June 14.

L. T. Crowley, chairman of the board, accepted the resignation with reluctance after Mr. Buford agreed to remain with the road on a consulting basis. The board indicated that J. P. Kiley, vice-president (operations) would be selected to succeed Mr. Buford.

Among demands the board rejected was one to establish 100 miles and 5 hours as the basic "day" for passenger trainmen and conductors, who now have a 7½-hour or 150-mile day.

Members of the board were Chairman Roger I. McDonough, Mart J. O'Malley, and Gordon S. Watkins. The board made two reports—one on the demands of the Order of Railway Conductors and the Brotherhood of Railroad Trainmen; and the other on the demands of the Railroad Yardmasters of America. Similar demands by the Switchmen's Union of North America are still pending.

T. & P. Freight Terminals Picketed by Teamsters

The Texas & Pacific has reported that its principal freight terminals in Texas and Louisiana are being picketed by members of the A.F. of L. Teamster's Union, as 300 drivers and mechanics of the road's motor truck subsidiary struck over wages and working rules. Although rail service is not affected directly, the T.&P.'s city and over-the-road truck deliveries are at a standstill. The railroad's motor subsidiary is known as the Texas & Pacific Motor Transport. It operates 242 motor trucks of city and long haul trailer types which function parallel to the railroad's 1,800-mi. line as a coordinated auxiliary service of the railroad for less-than-carload shipments. Principal among the union's demands is that the drivers be relieved of assisting in the loading and unloading of their vehicles at terminals. The union is also seeking a wage increase.

Brotherhoods Taking Strike Vote in Canada

Fifteen international brotherhoods involved in a wage-hour dispute with Canadian railroads are distributing some 90,000 strike ballots, returnable July 24. The unions are seeking a 40-hr. week in place of the present 48-hr. week, plus a general wage increase of seven cents per hour. A government conciliation board, in April, recommended a compromise settlement calling for a 44-hr. week with a pay increase of about 6.8 cents per hour. This proposed settlement, while accepted by the railway companies, was rejected by the 15 unions now taking a strike vote as well as by another group of unions which had sought a 40-hr. week with a 10-cent per hour pay increase. (See *Railway Age* of April 22, page 71; April 29, page 69, and May 6, page 58.)

Meantime, the Canadian cabinet, acting through Prime Minister L. S. St. Laurent, has rejected a request from seven provinces—all except Ontario, Quebec and Newfoundland—to postpone

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If we do our job right, Keystone will beat the trucks seven ways from Sunday! Nobody will be able to touch us . . . for all 'round speed, dependability, courteous, customer-pleasing service. That goes for the trucks, other railroads . . . and yes, for air freight, too!

To stimulate interest in its new "Keystone" service for less-carload freight, the Pennsylvania has recently distributed to all its employees an attractive three-color booklet, 4½ in. by 6 in., two pages of which are reproduced above. The new service was fully described in the *Railway Age* of February 25, page 33

the June 16 effective date of the 3.4 per cent freight-rate increase awarded to Canadian railways on May 25 by the Board of Transport Commissioners. (See *Railway Age* of May 27, page 53.) The cabinet, Mr. St. Laurent told the premiers of the protesting provinces, feels that the board's award should not be interfered with pending argument on the provinces' formal appeal to the cabinet from the 1949-1950 series of rate increases which, including the 3.4 per cent, aggregate 20 per cent. The board has found, the Prime Minister said, that the railways require additional revenue, and the cabinet does not think it should assume this finding to be wrong at least until the appeal is heard, probably sometime in August. The additional revenue must come, he added, either from users of the railways or from the public treasury, and he questioned whether the provincial premiers would suggest that it be provided at this time by subsidy.

April Accident Statistics

The Interstate Commerce Commission has made public its Bureau of Transport Economics and Statistics' preliminary summary of steam railway accidents for April and this year's first four months. The compilation, which is subject to revision, follows:

Item	Month of April 1950	Month of April 1949	4 months ended with April 1950	4 months ended with April 1949
Number of train accidents*	701	668	2,956	3,166
Number of accidents resulting in casualties	41	42	147	171
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	84	95	284	308
Injured	115	76	304	283
Passengers on trains:				
(a) In train accidents*				
Killed	—	—	30	—
Injured	197	29	485	165
(b) In train-service accidents				
Killed	3	4	6	9
Injured	134	147	632	648
Travelers not on trains:				
Killed	—	—	3	—
Injured	78	64	269	260
Employees on duty:				
Killed	17	32	95	141
Injured	1,500	1,829	6,300	7,922
All other nontrespassers:**				
Killed	135	124	553	540
Injured	455	404	1,989	2,117
Total—All classes of persons:				
Killed	239	255	971	998
Injured	2,479	2,549	9,979	11,395

*Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of $275 or more to railway property. Only a minor part of the total accidents result in casualties to persons, as noted above.

**Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:

Persons:				
Killed	125	110	516	499
Injured	344	273	1,458	1,458

A new combination of electronic devices known as the "Intelex system," which will almost completely mechanize handling of reservations for Pullman and coach space and will cut to less than one-third the time now consumed in these transactions, is being installed in Pennsylvania Station, New York. Already partly in operation for reservations from New York and Newark, N. J., on all 7 P.R.R. daily trains to Chicago, the new automatic reservation devices, developed by the International Standard Trading Corporation (an associate of the International Telephone & Telegraph Corp.), will be expanded progressively in the New York area and other principal cities on the road's system until, by the end of 1951, practically all reservations will be handled by "Intelex" equipment. The large cabinet in this photograph is the "space control unit." The operator has received, on the teleprinter machine to the left, a coded message from a ticket seller requesting a reservation to Chicago for the next day. While the message is coming over the teleprinter from the ticket seller, the unit automatically selects, from among 60 trays in its cabinet, the proper tray containing car diagrams for New York-Chicago trains on the day requested. The unit ejects the tray onto the desk before the operator, who selects the proper diagram from the simplified file in the tray and assigns the reservation. She then types a confirmation on the teleprinter, giving in code details of space assigned. Closing the tray file with her right hand, she sets the keys on the switch box above the teleprinter to send the message to the proper station or city ticket office. The machine automatically returns the tray to the cabinet and is ready for the next transaction. Elapsed time from arrival of message to dispatch of confirmation averages less than 30 seconds. During peak periods, incoming messages are "stacked" in the teleprinter, going to the operator in order

Waybill Studies

Two additional waybill studies have been issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. They are: Statement No. 5021, Distribution of Freight Traffic and Revenue Averages by Commodity Classes—Terminations in Fourth Quarter 1949, 1948, and 1947; and Statement No. 5016, covering "all terminations in 1948" in commodity classes 799 to 950 of the Manufacturers and Miscellaneous group. Tabulations in the latter show the traffic and revenue by commodity class, territorial movement, length of haul (short line), and type of rate.

Western Union "Charge It" Plan Begins for Rail Passengers

A new-type Western Union telegraph blank, designed to permit railroad passengers to send messages enroute and have charges billed against their home or office telephone, is currently entering railroad service following its approval by all passenger carrying railroads. The principal change from the present blank is the insertion of space for the sender's home address and telephone number and a modification of the space wherein message charges are calculated, which permits the filing of messages by Pullman porters, coach attendants or train hostesses with the first available station agent, without any interchange of cash

and without the delay of figuring charges.

Presented to the carriers through the regional passenger associations in mid-April, the new service is expected to benefit both the carriers and the telegraph company. W.U. will benefit through consolidation of its revenue collections and elimination of costly adjustment procedures — often involving only a few pennies — which had to be negotiated with each individual agent under the prepay system. The carriers benefit in that the procedure for filing messages is faster and involves no handling of money by their representatives. In this connection W.U. has announced that railroad agents and other representatives will not be held responsible if the "charge it" system is abused or misused by a passenger.

May Employment

Railroad employment decreased 4.44 per cent—from 1,187,746 to 1,135,064—from mid-April to mid-May, and the mid-May total was 8.25 per cent below that of May, 1949, according to the preliminary summary prepared by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. The index of employment, based on the 1935-1939 average as 100, was 111.7 for May, compared with 118.3 for April, and 121.7 for May, 1949.

May employment was below that of April in all groups except those embracing maintenance of way and structures employees and executives, officials and staff assistants, which were up 4.29 per cent and 0.14 per cent, respectively. The decreases ranged from 9.66 per cent in the maintenance of equipment and stores group to 3.48 per cent in the group embracing transportation employees other than those in train, engine and yard service.

As compared with May, 1949, employment was down in all groups, the decreases ranged from 12.82 per cent in the maintenance of way and structures group to 2.26 per cent in the group embracing executives, officials and staff assistants.

First-Quarter Truck Traffic Up 19.1 Per Cent

Freight hauled by intercity Class I motor carriers increased 19.1 per cent in the first quarter of 1950, compared with the same period last year, according to the American Trucking Associations. Using the like quarter of 1941 as an index of 100, the 1950 first-quarter figure was 217, an all-time record. In 1949 the index number for the quarter was 182, and in 1948 it was 177.

"For the first time since 1947," the A.T.A. statement said, "all regions showed increases for the first quarter as compared to the same period of the previous year. The increases ranged from 1.1 per cent in the Pacific region to 30.5 per cent in the Southwestern region."

This 1950 showing was attributed to an increase in tonnage in all ten specific commodity breakdowns except agricultural commodities. The latter was down 10.5 per cent for the first quarter, compared to 1949, while increases on other commodity groups ranged from 5.7 per cent for film and associated products to 37.7 per cent for building materials. The comparisons were based on reports of 1,413 intercity truckers, who hauled 41,230,080 tons of freight in this year's first quarter, compared with 34,622,399 tons in the like 1949 period.

April Truck Traffic

Motor carriers reporting to American Trucking Associations transported in April 3,910,770 tons of freight, a decrease of 7.7 per cent below the previous month's total of 4,237,277 tons, and an increase of 18 per cent above the 3,313,818 tons transported in April, 1949. The figures, according to A.T.A., are based on comparable reports from 303 truckers in 41 states.

C.A.B. Proposes New Curbs On Irregular Air Carriers

The Civil Aeronautics Board has proposed an amendment in regulations governing "large irregular carriers" so as to limit the number and pattern of flights such carriers can make.

Under the new proposed rule, the large irregular carriers would be limited to three flights each month in the same direction between a specified number of major cities. They would be limited to eight flights each month in one direction between points other than the specified cities, and they would not be permitted to operate between any two points in the same direction on the same day of two consecutive weeks.

This rule, the C.A.B. explained, would apply to all flights by such carriers, whether the flights are common or contract. The board went on to say the number of flights to be permitted "is considered adequate in view of the volume and regularity of scheduled service."

The provisions set out in the proposed rule would be applied by the C.A.B. "as an express condition on the operating authority granted . . . and the letters of registration issued." Further restrictions on the carriers, as outlined in the rule, would prevent flights "so arranged as to result in any uniform pattern or normal consistency of operations between any two points," and would define the term "point" as the 50-mi. radius of any city, airport or place where aircraft may be landed or taken off.

In announcing the proposed amendment the C.A.B. set July 10 as the closing date for interested persons to submit views or arguments in connection with the change. The board will then take action and the amendment finally adopted "may be changed in light of the comment received."

The board said the rule, if allowed to become effective, will provide only interim limitations on large irregular carriers "pending final action on the individual exemption applications."

Average Freight-Car Load Was 40.6 Tons in 1949

Carload freight handled by Class I railroads in 1949 averaged 40.6 tons per car, a drop of one ton from the all-time high of 41.6 tons achieved in 1948, according to an analysis prepared by the Car Service Division, Association of American Railroads, on the basis of commodity statistics issued by the Interstate Commerce Commission. The analysis was sent recently to A.A.R. member

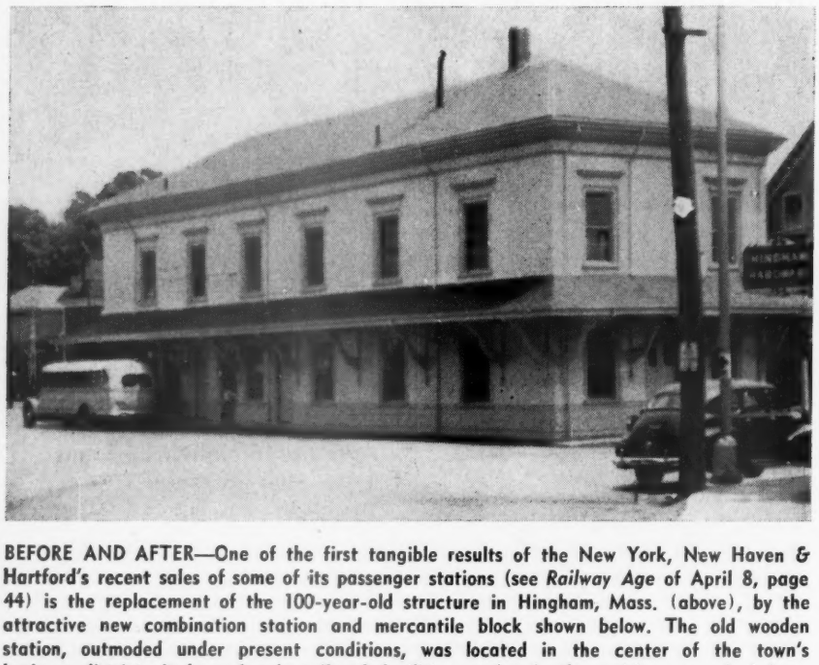
Some of the crowd examining equipment exhibited by Yale & Towne at a special show for the station service people at the annual meeting of the A.A.R.'s Freight Station Section (For a full report on the meeting see page 62)

roads by C.S.D. Chairman Arthur H. Gass.

The one-ton drop from the previous year, Mr. Gass said, was due "in large part to the fact that Products of Mines represented a smaller proportion of the total loadings in 1949 than in 1948." He added that, while a number of commodities showed "substantial" decreases under the average load of 1948, "the average decrease was closer to half a ton than to the one ton indicated by the total."

By commodity groups the average load in 1949 ranged from 14.2 tons for Animals and Products to 56.9 tons for Products of Mines. The latter, up 0.6 ton, was the only commodity-group average above the comparable 1948 figure.

The C.S.D.'s analysis of the figures indicated that, if the 1949 tonnage of each commodity class had been handled at the 1948 average tons per car, the number of carloads handled would have been 286,000 less than were reported for 1949. "Savings through heavier loading," Mr. Gass explained, "amounted to 222,000 carloads and losses through lighter loading totaled 508,000 carloads . . . Generally speaking, it may be observed that the losses occurred in commodities which ordinarily move in closed cars and that the savings were largely in open-top cars."



BEFORE AND AFTER—One of the first tangible results of the New York, New Haven & Hartford's recent sales of some of its passenger stations (see *Railway Age* of April 8, page 44) is the replacement of the 100-year-old structure in Hingham, Mass. (above), by the attractive new combination station and mercantile block shown below. The old wooden station, outmoded under present conditions, was located in the center of the town's business district; it housed only railroad facilities, and only the waiting room had been used in recent years. The new brick and stone building, of Colonial design to match the prevailing architecture in Hingham, was erected on the site of the old station by Leatherbee & Co., of Brookline, Mass., which purchased the property from the railroad last summer. The building houses six stores in addition to the railroad passenger facilities, which are entered through the double doors (second section from right); the New Haven is a tenant in perpetuity of those facilities, which were opened on May 17. The railroad tracks run on the opposite side of the building; passengers step from the new waiting room onto a modern platform, protected from the weather by an ornamental marquee

Trainmen Support Rail Plea For Long-Haul Trucking Study

The Brotherhood of Railroad Trainmen has applied to the Interstate Commerce Commission for authority to intervene in any proceeding which the commission may institute in response to the recent railroad request for an investigation of "long-haul" highway transportation. The application indicated the brotherhood's purpose to support the railroads' proposal.

As noted in the *Railway Age* of April 15, page 65, the railroad petition was filed by 90 roads, and it asks the commission to defer action on 43 pending motor-carrier applications while it conducts the proposed general investigation.

Since the petition was filed, the commission has issued Examiner Irving J. Raley's proposed report recommending favorable commission action on one of the 43 applications—that wherein the Pacific Intermountain Express Company seeks authority to acquire Keeshin Freight Lines. (See *Railway Age* of June 3, page 46, and June 10, page 75). Now the commission has set July 27 as the date on which it will hear oral argument on the examiner's report at Washington, D.C. July 11 is the deadline date for the filing of exceptions to the report, while replies to exceptions are due July 27.

Survey Shows RRs Receive 25% Of Vacation Travel Expenses

Railroads receive approximately $420,500,000, or 24.6 per cent, of the $1,709,500,000 estimated to be spent annually by United States families for vacation travel, according to a nationwide survey recently completed by the research department of the Curtis Publishing Company, Philadelphia, Pa.

The survey is based on regular detailed reports, for the 12 months ended with May, 1949, from 4,000 families representing all age groups and residing in all types of communities in all parts of the country. For it, a vacation trip was defined as "any pleasure trip of three or more days duration away from home by any member, or group of members, of the family."

By projecting, on a national basis, the reports from these 4,000 "typical" families, the Curtis research department concluded that 23,893,000 families, or 62 per cent of all those in the U. S., take an annual total of some 43,000,000 vacation trips, involving an average of 2.2 persons each, lasting an average of 10.5 days, and requiring a total expenditure for all purposes of some $7,000,000,000.

	Per Cent of Use (By Number of Trips)	Average Miles Per Trip	Total Expenditure	Per Cent of Expenditure
Railroad (Pullman)	5.0	1,667	$ 254,700,000	14.9
Railroad (Coach)	12.7	764	165,800,000	9.7
Railroad (Total)	17.7	....	$ 420,500,000	24.6
Automobile (including all expenditures except cost of car)	79.5	928	969,300,000	56.7
Bus	10.8	545	82,100,000	4.8
Air line	3.4	1,376	164,100,000	9.6
Ship and boat (except overseas)	3.1	267	37,700,000	2.2
Ship (overseas)	0.2	5,000	29,000,000	1.7
Other (bicycle, motor cycle, canoe, etc.)	1.0	510	6,800,000	0.4
Total	115.7*	1,044**	$1,709,500,000	100.0

*Exceeds 100 per cent because many trips used more than one method of transportation.
**Average.

Of this total, it was estimated that $1,709,500,000, or 24.4 per cent, is spent for actual transportation; the relative use of different forms of transportation and the amount spent on each, is shown in the accompanying table.

Almost exactly half of all vacation trips, the survey shows, are taken in summer, and a little over one-fourth in the fall, with the remaining fourth being almost evenly divided between spring and winter. Rail travel, however, is relatively heaviest in winter. Seasonal percentages of all vacation trips involving rail travel are, for Pullmans—winter, 9.1; spring, 6.7; fall, 4.9; and summer, 3.7; for coaches—winter, 22.7; spring, 12.5; summer, 11.1; and fall, 10.9. Air travel is also heaviest, relatively, in the winter and lightest in the summer; automobiles and boats are used most heavily in summer and fall and least in winter, while bus travel is heaviest, proportionately, in spring and lightest in summer.

Illinois Central Fetes 50-Year Veterans

More than twenty-two centuries of railroad service with the Illinois Central were celebrated in Chicago on June 16 when the railroad paid tribute to 45 veteran employees who will, or have, completed a half-century of employment in 1950. President Wayne A. Johnston was the host at a luncheon attended by the veterans and approximately 400 members of the I.C. organization, including the board of directors. Each veteran was awarded by Mr. Johnston with a 14-karat gold lifetime pass in a morocco leather case. These passes, good for travel anywhere on the Illinois Central system, have been awarded to 484 individuals, including the present "graduating class."

World Transportation Fair At Los Angeles Next Year

Every form of rail travel, from earliest experimental engines to modern locomotives, together with all other forms of transportation, will be featured at the World Transportation Fair to be held in Los Angeles, Cal., from May 30, 1951, to September 9. Negotiations have been completed for leasing Santa Anita park, which will serve as nucleus for the fair, according to a recent announcement by Ira W. Curry, director of the fair. Exhibitors of all forms of transportation are being asked to contrast new models with those of ancient vintage as a special feature.

Freight Car Loadings

Loadings of revenue freight in the week ended June 10 totaled 795,852 cars, the Association of American Railroads announced on June 15. This was an increase of 86,265 cars, or 12.2 per cent, above the previous week (which included the Memorial Day holiday), a decrease of 12,304 cars, or 1.5 per cent, below the corresponding week last year, and a drop of 110,811 cars, or 12.2 per cent, under the equivalent 1948 week.

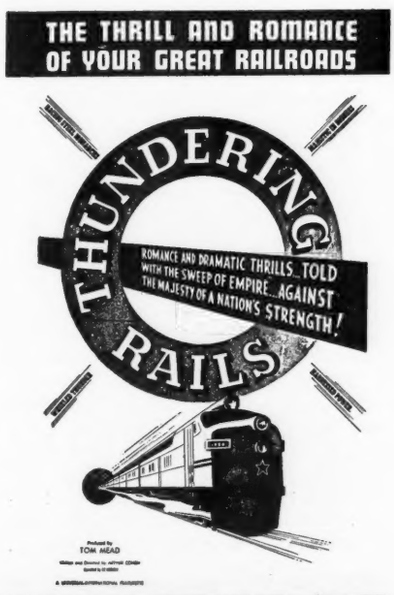
Loadings of revenue freight for the week ended June 3 totaled 709,587 cars, and the summary for that week as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, June 3

District	1950	1949	1948
Eastern	124,290	118,493	140,037
Allegheny	147,061	143,152	171,787
Pocahontas	54,071	61,696	73,657
Southern	113,767	106,319	124,523
Northwestern	111,735	116,080	121,365
Central Western	107,151	100,340	115,647
Southwestern	51,512	52,744	64,190
Total Western Districts	270,398	269,164	301,202
Total All Roads	709,587	698,824	821,206
Commodities:			
Grain and grain products	37,186	40,890	40,423
Livestock	7,090	8,125	10,927
Coal	125,824	142,708	196,443
Coke	14,271	12,332	14,501
Forest products	40,873	34,946	41,644
Ore	74,293	78,174	81,590
Merchandise l.c.l	73,461	80,099	93,447
Miscellaneous	336,589	301,550	342,231
June 3	709,587	698,824	821,206
May 27	780,959	784 824	904,757
May 20	743,307	773,910	879,177
May 13	711,819	771,738	846,945
May 6	744,040	768,327	880,287
Cumulative total 22 weeks	14,692,222	15,832,452	17,368,570

In Canada.—Carloadings for the week ended June 3 totaled 78,985 cars, compared with 72,748 cars for the previous week, and 73,970 cars for the corresponding week last year, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
June 3, 1950	78,985	31,285
June 4, 1949	73,970	29,711
Cumulative totals for Canada:		
June 3, 1950	1,552,259	1,591,042
June 4, 1949	669,372	697,966


THE THRILL AND ROMANCE OF YOUR GREAT RAILROADS
THUNDERING RAILS
ROMANCE AND DRAMATIC THRILLS...TOLD WITH THE SWEEP OF EMPIRE...AGAINST THE MAJESTY OF A NATION'S STRENGTH!
Produced by TOM MEAD
WATCH FOR IT AT YOUR LOCAL THEATRE

This 10-in. by 16½-in. poster, printed in blue on white, is being used to advertise Universal-International's two-reel railroad featurette, "Thundering Rails," which will be shown in many motion picture theaters during coming months

V.A. Reports 864 G.I.s Still Training as RR Mechanics

The number of veterans taking G.I. Bill job training as railroad mechanics has dropped at a much slower rate over the past three years than the overall decline in all types of on-the-job training, the Veterans Administration disclosed in a breakdown of veterans' enrollments under the bill on November 1, 1949. The breakdown compares 1949 figures with those of December 1, 1948, and December 1, 1947.

The drop in the number of veterans training to be railroad mechanics was from 1,219 in 1947 to 864 in 1949—a 23 per cent decline. The decrease in all types of on-the-job training enrollments over the three-year period was from 546,000 in 1947 to 285,000 in 1949, or 48 per cent.

B. & O. Seeks to Drop "Cincinnatian"

The Baltimore & Ohio has asked permission of the West Virginia Public Service Commission to discontinue the "Cincinnatian," daylight streamliner operating daily in both directions between Baltimore, Md., Washington, D. C., and Cincinnati, Ohio. Authority to discontinue the train already has been obtained from the Ohio Public Service Commission and it is understood that no permission is needed from the Public

Service Commission of Maryland. E. M. Talbott, special accountant for the B. & O. at Baltimore, told the West Virginia commission the train caused an out-of-pocket loss of $355,000 in 1949. In April, 1950, Mr. Talbott added, the out-of-pocket loss was about $40,000.

Four other B. & O. trains operate daily in each direction between the same West Virginia points, R. H. Holter, general passenger agent at Baltimore, told the commission. This, he said, is the same service that was available before the "Cincinnatian" was established in January, 1947. The train involved an original investment of approximately $1,200,000 and more than $100,000 have been spent on promotional and advertising expenses for it, Mr. Holter continued. Public use of the train was "fairly satisfactory" in 1947, but patronage has declined steadily since.

OVERSEAS

British Railways Establish New Employee Magazine

The British Railway Magazine, a new publication edited by the Railway Executive for employees of the nationalized British Railways, was issued for the first time last January. It is being published monthly, in six editions — one for each of the six regions into which the British Railways are divided. It succeeds similar publications of the former privately owned main line railways, which had been published under regional titles since the companies were nationalized on January 1, 1948.

Railroad Statistical Center Established in Holland

"Bureau Spoorwegdocumentatie" (Institute for World-Railroad-Documentation) has been established in the Netherlands, with headquarters at 112, Van Spilbergenstraat, Amsterdam-W. 2, and G. E. Tielman as general manager.

The purpose of the new bureau is to "collect, classify and record data contained in publications" on the economics, organization and operation "of the railroads of all countries," in order "to keep alive the interest in [railroad] history and to follow the future development of railroads."

Railroads in West Europe Have Returned to Pre-War Condition

Most western European railroads are doing "business as usual" today, with war-time wreckage, tardy schedules and lack of equipment a thing of the past, according to the Economic Cooperation Administration.

Reporting on the first two years of progress under the Marshall Plan, the E.C.A. said the equivalent of $162 million in Marshall Plan counterpart funds —foreign currency deposited by governments to match E.C.A. dollar grants— has been spent to put railroads back in service in countries where lack of transportation was one of the chief drawbacks to recovery after the war.

In France, where 85 per cent of the steam locomotives, 35 per cent of the electric engines, 64 per cent of the freight cars and nearly all passenger cars were blown up or taken by the Germans, railroads have resumed prewar operation and, in many cases, have improved service. France has withdrawn 28.4 billion francs (about $108.2 million) from its counterpart fund to repair tracks, rebuild depots and bridges, and modernize service through electrification. Replacing 750 steam engines with 250 electric engines is expected to result in substantial savings. Along the Paris-Lyons line, it is estimated that electrification will save approximately 600,000 metric tons of coal annually and about 2.5 billion francs (about $7 million).

In Greece, where wartime railroad losses were $140 million, all lines are now open except a small stretch in the north. After the liberation in 1944, the Greek government reported that of a total of 1,664 mi. of track, only 416 mi. were still serviceable, with rolling stock reduced from 7,868 units to 607 units. Heaviest sufferer was the government-owned Hellenic State Railway (S.E.K.), which operates more than half the country's rail lineage. To get the S.E.K. back into operation it was necessary to rebuild 248 bridges, five tunnels and 530 mi. of track, and repair 120 locomotives, 66 passenger coaches and 734 freight cars. Marshall Plan counterpart funds, equivalent to $6.7 million, have been spent on a modernization and reequipment program for the S.E.K. and privately owned railroad companies.

Austria has spent nearly $34.8 million in Marshall Plan counterpart funds to rebuild and purchase new rolling stock and reconstruct new roadways. Germany has withdrawn the equivalent of $12.7 million from its counterpart fund for its railroad program. Although Italy has not withdrawn any Marshall Plan counterpart funds to pay for railroad reconstruction, 68.8 billion counterpart lire (about $110 million) have been earmarked for projects which involve rebuilding tracks and buildings, construction and repair of rolling stock and purchase of machine tools and wreck clearing equipment. Italy has used the equivalent of $48.7 million in counterpart lire which accumulated under other American aid programs to finance railroad reconstruction. The country's railroads now are reported to be close to prewar efficiency.

Portugal.—The procurement and replacement program of the Companhia dos Caminhos de Ferro Portugueses—which operates 99 per cent of the broad (66 in.) gage and 97 per cent of the narrow (39⅜ in.) gage trackage of Portugal—provides for an outlay over the next five years of about $13,600,000 for purchase of locomotives, according to the Department of Commerce. The program calls for purchase in the United States of 25 broad-gage and 8 narrow-gage Diesel-electric locomotives. Ten broad-gage units will be of 1,500 hp. each and 15 will be of 390 hp. The narrow-gage units will be of 1,000 hp. Also provided for in the program is the purchase of 50 passenger cars for the broad-gage system and 20 passenger cars and 100 freight cars for the narrow-gage system.

Victoria (Australia).—Certain components for main-line Diesel-electric locomotives for the Victorian Railways (Australia) may be purchased in the United States if the necessary dollar allocation can be obtained, according to recently announced plans for "Operation Phoenix," a 10-year £80-million improvement program. The overall plan contemplates construction or purchase, at a total cost of nearly £40 million, of some 350 steam, Diesel-electric and electric locomotives, 30 Diesel rail cars, 290 all-steel passenger cars for long-distance services, 280 suburban coaches, 300 baggage cars and 9,000 freight cars. Approximately £43 million will be spent on electrification and double-tracking of certain sections of main line; new electrical and substation equipment; modernization of shops, including the North Melbourne locomotive shops; reconstruction and enlargement of Melbourne yards and freight stations; replacement of timber bridges with permanent structures; track improvements; and a new underground rail connection between North Melbourne and a new Richmond station.

ORGANIZATIONS

Anthony G. Allison, vice-president of public relations and research of the **Transportation Association of America** for the past seven years, has been appointed director of public relations of the **Chicago Board of Trade.** He will have charge of the board's educational, statistical and market information departments. Mr. Allison at one time served as manager of the Illinois Central's research and development bureau.

At the 1950 annual meeting of the **Chicago Railroad Diesel Club** on June 8, the following new officers were elected to serve for the coming year: President, W. L. Huebner, division master mechanic, Atchison, Topeka & Santa Fe; first vice-president, O. P. Jones, division master mechanic, Chicago & North Western; second vice-president, F. T. Kuhns, general foreman, Chicago, Milwaukee, St. Paul & Pacific; third vice-president, H. W. Rasor, master mechanic, New York Central; secretary-treasurer, R. J. Hughes, mechanical department, C. & N. W.

Announcement has been made of additional speakers at the 24th annual meeting of the **A. A. R. Mechanical Di-**

vision at the Congress Hotel, Chicago, June 26 to 28. J. W. Barriger, president of the Chicago, Indianapolis & Louisville, will address the meeting at the opening session on June 26, and K. C. Underwood, president, Merchants Despatch Transportation Corporation, Chicago, will make the opening address on June 27.

The **Traffic Club of New York** will hold its noon day forum luncheon on June 20 at 12:30 p.m., in the ballroom of the Hotel Commodore, 42nd street and Lexington avenue, New York. Gill Robb Wilson, aviation columnist of the New York Herald Tribune, will speak on "Behind the Scenes in Aviation."

The **Great Lakes Regional Advisory Board** will hold a two-day session, June 27 and 28, in the Hotel Statler, Detroit, Mich. The sessions will be addressed by H. E. Stringer, assistant chairman, Car Service Section, Association of American Railroads, W. E. Callahan, manager, Open Car Section of the same organization, and W. J. McGarry, manager, Ore and Coal Exchange, Cleveland, Ohio, who will outline the picture of Great Lakes traffic. R. W. Wettstyne, general traffic manager, Firestone Tire & Rubber Co. and president of the board, will preside. Governor G. Mennen Williams of Michigan will address the second day formal luncheon of the board, which will be co-sponsored by the Traffic Club of Detroit. W. O. Briggs, Jr., general manager of the Detroit Tigers, will be the toastmaster.

W. Walter Williams, immediate past chairman of the National Committee for Economic Development, will be guest speaker at the next quarterly meeting of the **Pacific Northwest Advisory Board,** at the Washington Athletic Club, Seattle, Wash., on June 22. C. W. Taylor, manager, Refrigerator Car Section, Chicago, will represent chairman A. H. Gass of the Car Service Division, Association of American Railroads, and will give a summary of the national transportation situation with respect to car supply. The consolidation report of the railroad contact committee will be presented by Harold M. Turner, chairman, and superintendent of transportation of the Union Pacific at Portland, Ore.

SUPPLY TRADE

Fairbanks, Morse Enters Canadian RR Diesel Field

Fairbanks, Morse & Co. and the Canadian Fairbanks-Morse Company have entered the Canadian railroad Diesel locomotive field through purchase of a substantial stock interest in the Canadian Locomotive Company of Kingston, Ont. (see *Railway Age* of May 20, page 224). Directors and stockholders of Canadian Locomotive at a special meeting on June 5 approved a stock purchase plan placing control of future operations of the company with Fairbanks, Morse and Canadian Fairbanks-Morse. Robert H. Morse, Jr., president of Fairbanks, Morse and chairman of the executive committee of Canadian Fairbanks-Morse, has been elected president and chief executive of Canadian Locomotive.

Gordon R. Anderson has been appointed general manager of the Freeport (Ill.) Works of **Fairbanks, Morse & Co.,** and **J. F. Weiffenbach** succeeds Mr. Anderson as manager of engineering of the Beloit (Wis.) Works, as reported in *Railway Age* of June 10, page 81. The appointment of **Donald L. Harwood,** formerly assistant purchasing agent, as purchasing agent at Chicago, also has been announced.

Gordon R. Anderson

Mr. Anderson was graduated from the University of Michigan in electrical engineering. He joined Fairbanks, Morse at its Indianapolis (Ind.) Electrical Works in 1922 and was transferred to Beloit in 1929. He was appointed chief electrical engineer in 1932 and manager of engineering in 1946.

J. F. Weiffenbach

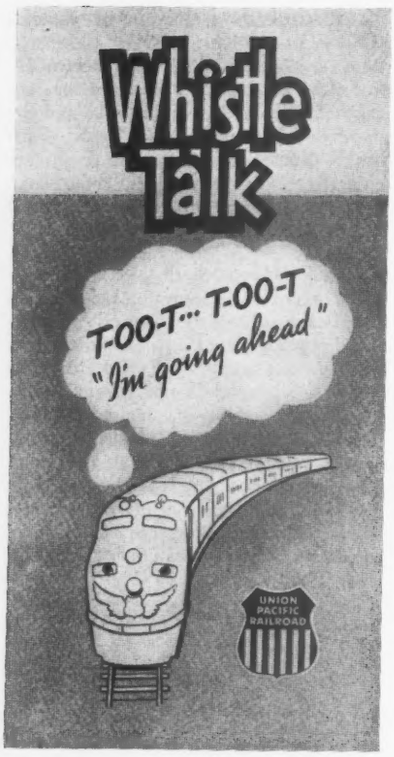
Mr. Weiffenbach, also a graduate of the University of Michigan, with a degree in mechanical engineering, joined the Electro-Motive division of General Motors Corporation in 1934 at Cleveland, Ohio, and later served with Electro-Motive at La Grange, Ill., where he was engaged in locomotive engineering and designing. Subsequently he joined Fairbanks, Morse, and before his recent appointment was serving as chief engineer of the Diesel locomotive division at Beloit.

John A. McCormick, district manager of sales in charge of the Chicago office of the **General Steel Castings Corporation,** has been appointed assistant vice-president—sales. In his new post Mr. McCormick continues in charge of the Chicago district sales office. **James W. Cooke,** district manager—sales, in charge of the eastern district sales office at Eddystone, Pa., has been appointed assistant vice-president, and will be associated with **W. M. Sheehan,** vice-president, in sales promotion and development, working closely with both the sales and engineering departments. **Howard F. Park, Jr.,** assistant district manager—sales at Eddystone, succeeds Mr. Cooke. Mr. Cooke was graduated from Princeton University in 1930 and entered the service of General Steel Castings in 1937. He worked several years in the production and service departments before joining the sales organization as sales representative for the New England district. He was appointed district manager—sales, in charge of the eastern district sales office in July, 1947.

James W. Cooke

Harold B. Leland has been appointed vice-president—manufacturing of the **Hood Rubber Company,** Watertown, Mass., a division of the B. F. Goodrich Company. He has been manager of employee and industrial relations since 1937.

Perry T. Coons has been appointed assistant to vice-president—sales of the **American Steel & Wire Co.,** a United States Steel subsidiary. The wire rope and construction materials division of the company, headed for 14 years by Mr. Coons, will be split into two separate sales units, with **M. E. Capouch** as man-



A bit of "inside" knowledge for passengers and friends of the Union Pacific is included in this 4-page pamphlet which identifies the meaning of the more common railroad whistle signals. On the last page, the railroad points to a major safety problem—the highway grade crossing—and asks those who drive to approach crossings with caution, "then look, listen and live"

ager of the construction materials sales division and **E. T. Eggers** as manager of the wire rope sales division.

David J. Gemmell, formerly vice-president in charge of sales, has been elected executive vice-president of the **Cleveland Chain & Manufacturing Co.,** Cleveland, Ohio. In his new post, Mr. Gemmell will continue to direct the company's national sales program and will assume new duties in conjunction with overall company policy.

Max D. Howell, vice-president, secretary, treasurer and assistant to president of the **United States Steel Corporation of Delaware,** has been elected vice-president and treasurer of the **United States Steel Corporation of New Jersey.**

James L. Johnson has been appointed sales manager for **Cordley & Hayes.** During the past four years, Mr. Johnson has been successively district manager and regional manager.

William H. Yeckley, formerly general superintendent of the Campbell Works steel plant of the **Youngstown Sheet & Tube Co.,** and **Karl L. Fetters** formerly special metallurgical engineer, have been appointed assistants to the vice-president in charge of operations.

John T. Ash has been appointed sales manager of the **Magnus Brass Manufacturing Company,** a subsidiary of the National Lead Company, at Cincinnati, Ohio. In 1932, Mr. Ash joined the Edna Brass Manufacturing Company, working in the Chicago territory. In 1943, when Edna Brass was acquired by the National Lead Company and its name changed to Magnus Brass, Mr. Ash continued to serve this company as well as the Magnus Metal Corporation, another National Lead subsidiary, in the Chicago district. He remained in this capacity until his recent appointment.

Lester N. Selig, chairman of the board of **General American Transportation Corporation,** Chicago, also has been elected chairman of the board of the **General American-Evans Company. Ben Colman,** vice-president of **Evans Products Company,** Plymouth, Mich., has been elected president of General American-Evans with offices in the Curtis building, Detroit. **V. R. Weiss,** formerly of O .C. Duryea Corporation and a director of the **Hulson Company,** has been elected executive vice-president of General American-Evans, with offices in Chicago. The General American-Evans organization will operate the management of the new D-F cars (see *Railway Age* of May 13, page 48), designed and built jointly by General American and Evans.

Hal P. Kibbey, assistant district manager of the **United States Steel Supply Company's (United States Steel Corporation** subsidiary) concrete reinforcing bar division, has been appointed assistant Chicago district manager of the company. He succeeds **Frederick L. Bruckner,** advanced to district manager of the Los Angeles (Cal.) warehouse as reported in the *Railway Age* of June 10.

EQUIPMENT AND SUPPLIES

FREIGHT CARS

2,193 Freight Cars Delivered in May

Freight-train cars delivered in May for domestic use totaled 2,193, including 982 cars delivered by railroad shops, compared with April deliveries of 971 cars, which included 748 delivered by railroad shops, the American Railway Car Institute has announced. May deliveries included 753 box cars, 568 hopper cars, 552 refrigerator cars, 205 gondola cars, 75 tank cars and 40 cars of other types.

Freight-train cars ordered last month for domestic service numbered 11,636, including 222 ordered from railroad shops, compared with April orders for 3,308, all of which were ordered from contract builders, the institute said. The backlog of cars on order on June 1 was 42,300, including 16,908 on order from railroad shops, compared with 32,857 on order on May 1, and 52,281 on order on June 1, 1949.

The **Missouri Pacific** has ordered 200 70-ton hopper cars from its DeSoto, Mo., shops. One hundred of the cars will be divided equally between the Gulf Coast Lines and the International-Great Northern.

The **Seaboard Air Line** has ordered an additional 200 70-ton phosphate cars from the Pullman-Standard Car Manufacturing Company. Delivery of this equipment, which will cost an estimated $1,300,000, is scheduled to begin in September.

The **Spokane, Portland & Seattle** has ordered 12 caboose s from the Northern Pacific shops.

PASSENGER CARS

Budd Announces New Rail Diesel Car

The Budd Company has announced another model of its rail Diesel car. Designated RDC-4, it is similar to Budd's three other standard-length RDC types except that it is 73 ft. 10 in. long and contains a 30-ft. railway post office and a 32-ft. baggage section instead of passenger seats. It cost, f.o.b. Philadelphia, Pa., is $126,850. Like its counterparts, RDC-4 will be constructed of stainless steel and powered by two 275-hp. Diesel engines operating through torque converters. RDC-4 will have washrooms in both compartments and there will be a water cooler and hot plate in the post office section. Other models of the car are: RDC-1, which seats 90 passengers; RDC-2, which has a 17-ft. baggage section and seats for 71; and RDC-3, which has a 15-ft. railway post office, a 16-ft. 9-in. baggage section and seats for 49.

The **Western Pacific** has ordered a second rail Diesel car (RDC-2) from the Budd Company. The new car will go into tri-weekly local service between Salt Lake City, Utah, and the San Francisco bay area via Oakland. The road's first such car, ordered in February (see *Railway Age* of February 4, page 67), has gone into the Sacramento, Cal., shops for installation of additional sanitary facilities and reclining seats, subsequent to several "shakedown" runs.

SIGNALING

The **Chicago, Burlington & Quincy** has ordered from the Union Switch & Signal Company material required to install centralized traffic control on 74.3 mi. of single track between Brookfield, Mo. and Missouri City Junction. The 5-ft. style C control machine will be installed at

Brookfield. In addition to the code equipment, the order also includes style H-2 searchlight high signals, N-2 color-light dwarf signals, M-22B switch machines, SL-6A electric switch locks, coded track circuit apparatus and relays, rectifiers, transformers and switch circuit controllers. The field work will be handled by railroad forces.

The **Southern Pacific** has ordered from the Bendix Radio Division of Bendix Aviation Corporation 100 sets of radio equipment to be installed on locomotives and cabooses in road freight service, as well as in switch engines and yard offices. The road territories are between Los Angeles, Cal., and Bakersfield, 170 mi.; Los Angeles and Watsonville Junction, 373 mi.; and Roseville and Eugene, Ore., 546 mi. The yards in which radio is to be installed are at Los Angeles, Tucson, Ariz., and Fresno, Cal. The S.P. already has in service 48 mobile and 32 stationary radio transmitter-receivers and 20 walkie-talkies.

CAR SERVICE

I.C.C. Service Order No. 853, effective from June 9 until July 15 unless otherwise modified, provides that railroads serving Arizona and California shall furnish and transport so-called giant refrigerator cars at freight rates applicable on the same commodities when loaded in standard reefers. There is an exemption provision which specifies that the order shall not apply to various groups of giant reefers totaling 240 cars. The order is similar to Service Order No. 817 which expired April 30.

CONSTRUCTION

M.&St.L. Building—Correction

Under the heading "M.&St.L. begins work on new $1,000,000 office building" in the *Railway Age* of May 13, page 67, a statement was made that "The site of the building is a 250-sq.-ft. plot near the edge of the downtown district." This should have read, "The site of the building is a plot 250 feet square, near the edge of the downtown district."

Canadian Pacific.—This road has the following construction projects scheduled or under way: Fort William, Ont.—replace boiler plant, provide Diesel fueling facilities and repair Island No. 1 coal dock; Winnipeg, Man.—replace two baggage elevators on station platforms and provide service facilities for oil-burning locomotives; Crystal City, Man.—replace timber bridge with 80-ft. steel deck girder on concrete abutments; Swift Current, Sask.—replace two-track 18-ft. span with two-track 35-ft. plate girder structure; Rockglen, Sask.—replace pile and frame trestle with corrugated metal pipe culverts and fill; Alyth, Alta.—provide trackage with steam, water and sewer lines for cleaning refrigerator cars; Connaught Tunnel, B. C.—repair tunnel lining; Vancouver, B. C.—raise roof of tender shop and install crane runway; install additional marine elevator and make alterations to Pier C; Kimberley, B. C.—replace "high line" bridge with line diversion; Brookmere, B. C.—construct wye to replace 70-ft. turntable and provide duplex dwelling for locomotive firemen; Jessica, B. C.—replace three pile trestles with line diversion and one 20-ft. span bridge; and Stokes, B. C.—rebuild bent frame trestle 645 ft. in length.

Chicago, Milwaukee, St. Paul & Pacific.—Freight yard facilities at Savanna, Ill., are currently being enlarged at an estimated cost of $1,086,000. Grading is being done under contract by Peter Kiewit Sons' Company and the balance of the project will be undertaken by company forces. The project is expected to be complete about September 1. This road also is enlarging its rail mill facilities at Tomah, Wis., at an estimated cost of $92,000. The project is being undertaken by company forces.

Missouri Pacific.—The following construction projects are in progress, or will be started during the summer: Remodeling of Sedalia, Mo., passenger station by removal of second story and modernization of ground floor (company forces—$52,000); replacement of Sedalia reclamation plant facilities destroyed by fire ($90,500); remodeling and modernization of Hutchinson, Kan., passenger station, including removal of second and third stories (company forces—$32,000); reconstruction of bridge at Hamlin, Ark., as a 30-panel concrete trestle 540 ft. in length, including raising of track by three feet and 300-ft. fill at east end of structure (company bridge gang—$74,300); and similar work on a bridge at Levesque, Ark., to be reconstructed as a 29-panel concrete trestle, 522 ft. in length. Other major projects under way include the $232,000 installation of centralized traffic control between Mill Spring, Mo., and Poplar Bluff, described in the *Railway Age* of February 25, page 63, and the $1,786,000 consolidated freight station at St. Louis, described in the *Railway Age* of March 25, page 48.

Missouri Pacific—The Union of Memphis, a subsidiary of this road, has applied to the I.C.C. for authority to construct approximately 1.7 mi. of new main line inside the city of Memphis, Tenn. At the same time the road seeks authority to abandon 1.08 mi. of its present line in the city. Purpose of the abandonment is "to improve traffic and highway conditions" in the vicinity of East Parkway and Central Avenue, an intersection which the Union's rail line now crosses via an overhead bridge. The Union company agreed to relocate the line in a May 22 agreement with the city which renewed franchise rights. The city will contribute $100,000 toward the relocation, the state Highway Department will pay $25,000 and the road will pay approximately $282,000.

Union Pacific.—The following projects will be undertaken by contract not yet awarded: At Russell, Kan., construction of a new station, 130 ft. by 23 ft., of masonry on concrete foundation, $96,790; at Ogden, Utah, construction of a new laundry, 100 ft. by 180 ft., of masonry on concrete foundation, $774,720; at The Dalles, Ore., an addition to the station and platforms, $57,000; and at Los Angeles, Cal., construction of a masonry warehouse on concrete foundation, $55,200.

The following projects will be undertaken by company forces: At Kansas City, Kan., construction of 11,475 ft. of track, $87,550; between Ellis, Kan., and Sharon Springs and between Saline and Black Wolf, replacement and rearrangement of signals, $892,950; between Portland, Ore., and The Dalles, installation of cab signals and rearrangement of trackage, $1,216,090 (grading on this project being done under contract by Morrison-Knudsen); between South Junction, Ore., and Bend, construction of a 5,800-ft. passing siding, $53,530; at Las Vegas, Nev., extension and rearrangement of yard trackage, $313,360 (of which $20,240 represents cost of grading to be done on contract by Morrison-Knudsen); at Los Angeles, construction of a 4,800-ft. car cleaning track, $34,270, and of a central tower and intercommunicating system, $70,870; and at Wilmington, Cal., raising and replacement of tracks account subsidence, $158,800.

FINANCIAL

I.C.C. Refuses Mahaffie Act Relief for M.-K.-T.

Division 4 of the I.C.C. has denied an application of the Missouri-Kansas-Texas in which the road sought authority to issue $4,744,552 in secured debentures and thereby fund the unpaid interest accumulations on its 5 per cent adjustment mortgage bonds. The adjustment bonds, originally issued in 1922 in the amount of $55,787,965, are outstanding in the principal amount of $13,555,865. Unpaid interest on the issue is for the period from April 1, 1943 to October 1, 1949. Under the terms of section 20b of the Interstate Commerce Act, the so-called Mahaffie Act, the M.-K.-T. sought authority to create a secured-debenture mortgage and issue the secured debentures to satisfy this accumulation of unpaid interest (see *Railway Age* of July 30, 1949, page 65).

The unfavorable report to the application noted the road "does not con-

tend that the proposed modification is necessary to assure its continued sound financial condition or to enable it to avoid prospective financial difficulties." The road had based its case on two other contentions: (1) That the unpaid interest involves officials in "continual correspondence and discussions" to the extent that the road's efficiency of operation is impaired; and (2) that the unpaid interest has an adverse effect upon the M.-K.-T.'s credit and the market value of its securities, and, further, that payment of the interest in cash would divert funds urgently required for other expenses.

Examining these contentions, the commission found there was no "proof" that "correspondence and discussions" by the road's officers obstruct orderly conduct of M.-K.-T. affairs, and added that no evidence had been presented to warrant the invoking of section 20b provisions on this basis. As to harmful effects upon the road's credit, the report said the M.-K.-T. "has been able to borrow at reasonable interest rates substantial sums of money in recent years . . . and despite the interest accumulations, substantial amounts of new equipment have been purchased and financed." The commission also examined the road's earnings and on the basis of a statement by M.-K.-T. officials that earnings in the "foreseeable future" would not fall substantially below 1949, the commission went on to say that the road should be able to meet all other obligations and still be "more than able" to pay off the accumulated interest in cash by 1953.

B.&P. Asks New Revamp Plan; N.H. Wants to Buy Its Stock

The New York, New Haven & Hartford has applied to the Interstate Commerce Commission for authority to purchase Boston & Providence stock in the hands of the public at a per-share price not to exceed a maximum fixed by the commission. About the same time the commission was asked by the B.&P. trustee, Charles W. Mulcahy, to amend that road's reorganization plan to provide for the New Haven's purchase of the stock for $100 per share.

The N.H. application took the form of an amendment to a still-pending application which the road filed recently for authority to purchase the B.&P.'s 5 per cent debenture bonds, most of which are owned by the New Haven's president, Frederic C. Dumaine (see *Railway Age* of April 8, page 63). The New Haven described its proposal to buy the stock as an "important step" toward its "ultimate" acquisition of all properties of the B.&P. It said that 33,291 shares of the stock, which has a par value of $100 per share, are in the hands of the public; and that the price per share on the Boston Stock Exchange ranged from $80 to $49 during the period from 1917 through 1949. The 1949 range was from $79.25 to $59, and the 1950 range to May 18 was from $80 to $66.

Under B.&P. Trustee Mulcahy's amended plan the N.H. would issue the same securities in exchange for B.&P. properties which were called for in the plan that was rejected by the B.&P. reorganization court. In addition, it would supply such cash as might be necessary to pay all B.&P. obligations and leave enough to give B.&P. stockholders $100 per share. Among other features, the amended plan contemplates that the settlement with Mr. Dumaine and other holders of the B.&P. debentures would be in cash and securities equivalent to the $3,250,000 which the New Haven seeks authority to pay them in its application.

Central of Georgia.—*Control of Savannah & Atlanta.*—Denial, "without prejudice," of the C. of G.'s application to acquire control of the S. & A., "to give us and others a chance to bargain in order to maintain present competition," was asked by the Georgia Railroad during hearings on the application before I.C.C. Examiner Paul C. Albus at Savannah, Ga., June 5-7. The Georgia was joined in opposing the application by the towns of Camak, Ga., and Waynesboro and a number of other communities along the Savannah-Camak line of the S. & A.; by individual shippers in these communities; by the Brotherhood of Railroad Trainmen, the Order of Railway Conductors and the Brotherhood of Locomotive Firemen & Enginemen; and by the Louisville & Nashville, which, with the Atlantic Coast Line, is a lessee of the railroad property owned by the Georgia Railroad & Banking Co. and operated by the Georgia Railroad. Their opposition was based on the ground that the granting of the application would give the C. of G. control over the two shortest rail routes between Savannah and Atlanta—its own present line and the Georgia-S. & A. line via Camak—and would lead to eventual "drying up" and possible abandonment of the S. & A.

In addition to the C. of G. and the present owners of the S. & A., the application was supported by the Savannah Chamber of Commerce and a number of individual shippers. Central officers declared their company would retain independent operation of the S. & A.; and denied any intention to discontinue present "neutrality of handling traffic," to reduce service, or to abandon any part of the S. & A. Shippers who supported the application did so on the grounds that its granting would promote development of Savannah as a port and industrial center.

The Southern, which had originally appeared as a protestant, withdrew its objections during the hearings.

The Central's intention to apply for control of the S. & A. was noted in the *Railway Age* of March 11, page 105, and the proposed method of acquisition was outlined in the issue of April 29, page 73.

Gulf, Mobile & Ohio.—*Purchase.*—Division 4 of the I.C.C. has authorized this road to purchase the 33-mi. Joliet & Chicago as a step toward dissolution of the latter road. The G.M.&O. owns the stock of the J.&C. and operates its property under perpetual lease. The stock will be surrendered and provision made for payment or discharge of all debts and liabilities of the J.&C. Division 4's report said the purchase will result in corporate simplification and in some reductions in operating expenses and taxes to the G.M.&O.

New Securities

Division 4 of the I.C.C. has **authorized:**

Missouri Pacific.—To assume liability for $4,125,000 series 00 equipment trust certificates to finance in part 30 Diesel-electric locomotives costing an estimated $5,175,553 (see *Railway Age* of June 3, page 57). The certificates will be dated June 1 and will mature in 15 annual installments of $275,000 each, beginning June 1, 1951. The commission approved a selling price of 99.38 with a 2 3/8 per cent interest rate which will make the average annual cost of the proceeds approximately 2.48 per cent. Successful bid for the issue was that made by Halsey, Stuart & Co. and 6 associates. The certificates were reoffered to the public at prices yielding from 1.5 to 2.65 per cent, according to maturity.

New York Central.—To assume liability for $11,100,000 of equipment trust certificates to finance in part 73 Diesel-electric locomotives, 500 steel box cars, and 28 passenger coaches. Total cost of the new equipment is estimated at $14,223,560. (See *Railway Age* of June 3, page 58). The certificates, to be dated June 15, will mature in 15 annual installments of $740,000 each, beginning June 15, 1951. Division 4's report approved the selling price of 99.4177 for the issue, with interest at 2¾ per cent, which will make the average annual cost of the proceeds approximately 2.86 per cent. Salomon Bros. & Hutzler and 3 associates submitted the winning bid. The certificates were reoffered to the public at prices yielding from 1.625 to 2.925 per cent, according to maturity.

Reading.—To assume liability for $5,430,000 series S equipment trust certificates to finance in part 500 50-ton steel box cars and 1,000 50-ton steel hopper cars costing an estimated $6,857,850. (See *Railway Age* of May 20, page 226). The certificates, to be dated June 15, will mature in 30 semiannual installments of $181,000 each, beginning December 15, 1950. Division 4's report approved a selling price of 99.16 with interest at 2¼ per cent—the bid of Halsey, Stuart & Co. and 9 associates—which will make the average annual cost of the proceeds approximately 2.38 per cent. The certificates were reoffered to the public at prices yielding from 1.35 to 2.55 per cent, according to maturity.

Wabash.—To assume liability for $5,220,000 series C equipment trust certificates, the first installment of a proposed $8,535,000 issue. The entire issue will finance in part 43 Diesel-electric locomotives and other equipment costing an estimated total of $10,699,105. (See *Railway Age* of June 3, page 58). The series C certificates will be dated June 1 and will mature in 15 annual installments of $569,000 each, begining June 1, 1951. The annual payments for this first installment alone will be $348,000 each for the same 15-year period. The report

by Division 4 approved a selling price for the first installment of 98.651 with interest at 2⅛ per cent—the bid of Harris, Hall & Co. and 8 associates—which will make the average annual cost of the proceeds about 2.34 per cent. The certificates were reoffered to the public at prices yielding from 1.4 to 2.5 per cent, according to maturity.

Dividends Declared

Bangor & Aroostook.—$5.00 preferred, $1.25, quarterly, payable July 1 to holders of record June 16.

Camden & Burlington County.—75¢, semi-annual, payable July 1 to holders of record June 15.

Maine Central.—6% prior preferred, $1.50, quarterly, payable July 1 to holders of record June 24.

Norwich & Worcester.—8% preferred, $2.00, quarterly, payable July 1 to holders of record June 15.

Pittsfield & North Adams.—$2.50, semiannual, payable July 1 to holders of record June 16.

Seaboard Air Line.—50¢, payable June 30 to holders of record June 19.

Tunnel R. R. Co. of St. Louis.—$3.00, semi-annual, payable July 1 to holders of record June 15.

West Jersey & Seashore.—$1.50, semiannual, payable July 1 to holders of record June 15.

Average Prices Stocks & Bonds

	June 13	Last week	Last year
Average price of 20 representative railway stocks	42.64	40.86	35.47
Average price of 20 representative railway bonds	91.91	91.12	83.49

ABANDONMENTS

Division 4 of the I.C.C. has **authorized:**

Baltimore & Eastern.—To abandon 4.6 mi. of line between Hebron, Md., and Mardela Springs.

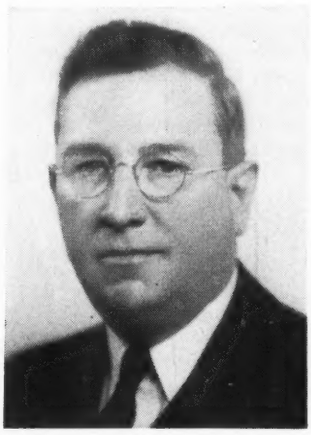
Chicago, Rock Island & Pacific.—To abandon a branch line of approximately 19 mi., extending from a junction with the road's main line near Haileyville, Okla., to Pittsburgh. Division 4's report said the branch has been operating at substantial losses for the past 2 or 3 years, with no prospects for increased traffic.

RAILWAY OFFICERS

EXECUTIVE

As announced in the *Railway Age* of May 20, **Edward C. McHugh** has been elected vice-president of the Bessemer & Lake Erie, at Pittsburgh, Pa., in addition to his positions as secretary and treasurer. Mr. McHugh was born at Pittsburgh on September 11, 1888, and received his education in public grade and high schools, Pittsburgh Academy and Duquesne University. He began his career in 1906 with the Lucius Engineering Company and in 1909 went with the American Window Glass Company. Mr. McHugh entered railroad service on January 1, 1914, as clerk in the office of the president of the B.&L.E. and the Union and on March 1, 1928, became secretary to the president of those roads. He was appointed assistant to president of the B.&L.E., the Union, the Etna & Montrose and the Youngstown & Northern on January 1, 1936.

On April 23, 1940, Mr. McHugh became vice-president of the Union, the



Edward C. McHugh

E.&M. and the Y.&N., and on July 18, 1946, was appointed also secretary-treasurer of the Union. On July 24, 1946, he became also secretary-treasurer of the B.&L.E., the E.&M., and the Y.&N.

As announced in the *Railway Age* of June 3, **Walter W. Kremer** has been elected vice-president—traffic of the Minneapolis, St. Paul & Sault Ste. Marie at Minneapolis, Minn. Mr. Kremer was born on May 10, 1900, at Kalamazoo, Mich., and entered railroad service in 1917 as a rate clerk with the Pennsylvania in his home town. He joined the Minneapolis & St. Louis in 1924 as

Walter W. Kremer

traveling freight agent at Detroit, Mich., and from 1929 to 1934, held a similar post with the Canadian Pacific, at Grand Rapids, Mich. Subsequently he was promoted to district freight representative at Detroit, and in 1937 was appointed district freight agent for the C. P. at St. Louis, Mo. Mr. Kremer became general freight agent at Detroit in January, 1941, and was transferred to Boston, Mass., in June of that year. In June, 1944, he joined the Boston & Maine as western traffic manager, at Chicago, returning to the C. P. in October, 1944, as general freight agent at Chicago. He entered the service of the Soo Line in January, 1948, as general traffic manager.

FINANCIAL, LEGAL & ACCOUNTING

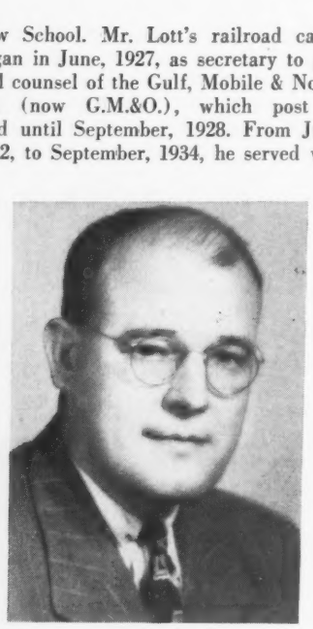
Philip M. Kelly has been appointed comptroller of the Jersey Central Lines at Jersey City, N. J., as reported recently in *Railway Age*. Mr. Kelly was born at Marquette, Mich., on July 3, 1895, and started his railroad career with the Jersey Central in 1912, as an apprentice in the motive power department. He has been connected with that road ever since, except for a two-year period during World War I when he served overseas with the U. S. Army Engineers. After finishing his training course in 1916, Mr.

Philip M. Kelly

Kelly became a draftsman in 1919. In 1920 he was promoted to inspector and in 1925 became assistant chief clerk to the railroad's general manager. In 1926 he was appointed research engineer and placed in charge of a research bureau created at that time. In 1931 this bureau became a division of the accounting department, with which Mr. Kelly has since been connected. He was appointed auditor of disbursements in 1937 and in 1942 was named assistant comptroller, the position he held until his recent promotion.

Y. D. Lott, Jr., whose promotion to general solicitor of the Gulf, Mobile & Ohio at Mobile, Ala., was reported in the *Railway Age* of May 20, was born on August 28, 1906, at Jackson, Miss., where he attended Central High School. He received an A.B. degree in 1927 from Spring Hill College and an LL. B. in 1932 from Georgetown University

Law School. Mr. Lott's railroad career began in June, 1927, as secretary to general counsel of the Gulf, Mobile & Northern (now G.M.&O.), which post he held until September, 1928. From June, 1932, to September, 1934, he served with



Y. D. Lott, Jr.

the Federal Bureau of Investigation as a special agent, and subsequently returned to the G.M.&N.'s legal department. In September, 1940, he was advanced to general attorney, in which capacity he was serving at the time of his promotion.

William Simpson, assistant paymaster of the Canadian Pacific, with headquarters at Calgary, Alta., has been advanced to paymaster at that point, succeeding **E. H. Boalch,** retired.

As was reported in *Railway Age* recently, **Fred E. Gregg,** comptroller of the Jersey Central Lines at Jersey City, N. J., has retired. Mr. Gregg was born on December 4, 1880, at Lambertville, N. J., where he attended grade and high schools. After attending Temple University, Mr. Gregg entered railroad service on June

Fred E. Gregg

16, 1902, in the accounting department of the Jersey Central. He was appointed traveling auditor on February 1, 1907; chief clerk to comptroller on November 1, 1917; auditor miscellaneous accounts on April 16, 1929; and assistant comptroller on November 16, 1937. He became comptroller on July 8, 1942.

Samuel P. Delisi, assistant general solicitor of the Pennsylvania at Pittsburgh, Pa., has resigned to enter private law practice.

Frank G. Kurka, attorney of the Atlantic Coast Line, has been appointed solicitor, with headquarters as before at Wilmington, N. C.

Carl H. Davis, general solicitor of the Atlantic Coast Line at Wilmington, N. C., has retired at his own request after more than 37 years of service with that road. Mr. Davis, born at Petersburg, Va., was educated in McCabes School, Petersburg, Randolph-Macon College and the University of Virginia (B.L., 1902). He practiced law at Norfolk, Va., and Petersburg until January 1, 1913, when he joined the A.C.L. at Petersburg as assistant to general counsel. He was appointed general attorney in March, 1922, and general solicitor on July 1, 1935, which position he held until his retirement.

OPERATING

R. C. Post, secretary to the general manager of the Chicago, Rock Island & Pacific, has been advanced to assistant to the general manager, with headquarters at Chicago.

J. N. Sailor, whose promotion to superintendent Moberly division, of the Wabash, with headquarters at Moberly, Mo., was reported in the *Railway Age* of June 3, was born on March 1, 1907, at Montgomery, Mo. He studied civil engineering at the University of Alabama from 1926 to 1930, and entered railroad service with the Wabash in May, 1931, as assistant engineer, construction department, at St. Louis, Mo. He was appointed to the same post at Montpelier, Ohio, in 1935, and at Owosso, Mich., in 1936, and the next year became track supervisor at Moberly. Two years later Mr. Sailor was made assistant trainmaster at Decatur, Ill., returning to Moberly in that capacity in 1941. He was advanced to trainmaster at Decatur in May, 1942, and in December, 1943, was transferred again to Montpelier, where he served as trainmaster until his latest promotion.

TRAFFIC

As recently reported in the *Railway Age*, **Arthur Edward Bourne** has been appointed general freight agent of the Western Maryland at Pittsburgh, Pa. Mr. Bourne was born at St. Louis, Mo., on April 13, 1905, and attended St. Louis University and Rubicam Business College. He entered railroad service in June, 1923, with the Missouri Pacific. Joining the W. M. at St. Louis in 1924, Mr. Bourne became traveling freight agent at Cleveland, Ohio, in 1927. He was appointed chief clerk to the vice-president at Baltimore, Md., in 1930; commercial freight agent at St. Louis in 1932; and general agent at Cincinnati, Ohio, in 1933. He transferred to Detroit, Mich., in 1937 and to Cleveland on June 15, 1939, where he remained until his recent promotion.

G. C. Smith, whose promotion to assistant traffic manager of the Missouri Pacific Lines at Los Angeles, Cal., was reported in the *Railway Age* of June 3, was born on October 19, 1890, at Stratton, Neb. Mr. Smith graduated from Waverly (Kan.) High School in 1908, and later attended Kansas State Normal, Emporia, for two years, being employed during summer vacations with the Atchison, Topeka & Santa Fe at Waverly as apprentice-operator. In September, 1912, he was appointed agent-telegrapher at Greenfield, N. M., and from 1914 to 1925, held various positions on the Los Angeles division of the Coast Lines and in the traffic department of the Santa Fe at San Bernardino, Cal. Subsequently he was appointed traveling freight and passenger agent at San Bernardino, leaving the Santa Fe in January, 1927, to become contracting freight agent for the Luckenbach Steamship Company, Los Angeles. The following May Mr. Smith returned to railroad service as traffic freight agent with the M. P. Lines. He became perishable freight agent at Los Angeles in 1929, and district manager perishable traffic in 1936. In January, 1941, he was appointed general agent at Los Angeles, the position he held at the time of his recent promotion.

F. J. Foley has been appointed general agent of the Grand Trunk (part of the Canadian National) at Memphis, Tenn., succeeding **G. R. Nolan,** transferred to Cincinnati, Ohio, as reported in the *Railway Age* of May 13.

R. E. Buckles, assistant general manager of the Southern Pacific Transport Company in Texas and Louisiana, has been appointed general agent, merchandise traffic, of the S. P. (rail) Lines in Texas & Louisiana and vice-president and general manager of the transport company, with headquarters at Houston, Tex.

George M. Hill, traffic representative of the New York, New Haven & Hartford at Manchester, N. H., has been promoted to district traffic agent at Presque Isle, Me., succeeding the late **F. O. Crock.**

Alexander E. Barkalow has been appointed coal freight agent of the Erie at New York, succeeding **D. D. Jamieson,** who has resigned to engage in other business.

Harvey Allen, whose promotion to freight traffic manager of the Missouri-Kansas-Texas, with headquarters at St.

Louis, Mo., was reported in the *Railway Age* of June 10, was born on February 28, 1889, at Evansville, Ind., and educated at Staunton Military Academy, Staunton, Va., and Washington & Lee University. His railroad career began in November, 1907, in the local freight office of the Katy at St. Louis; in 1909 he was transferred to the general office, freight traffic department, to serve in various clerical capacities until February, 1918, when he entered the United States

Harvey Allen

Army. On his return to the Katy in August, 1919, he was made chief clerk in the general freight office at Dallas, Tex., and in 1920 was appointed division freight agent at Oklahoma City, Okla. Two years later Mr. Harvey was promoted to assistant general freight agent at St. Louis, being advanced to general freight agent at Dallas in 1926. He was transferred to St. Louis in 1931, and in November, 1946, promoted to freight traffic manager of the M.-K.-T. in Texas, with headquarters at Dallas. He held the latter post prior to his recent promotion.

MECHANICAL

H. A. Mason, general car inspector of the Texas & Pacific, has been promoted to superintendent of the car department, with headquarters as before at Dallas, Tex., succeeding **D. W. Akins,** whose retirement was reported in the *Railway Age* of June 10. **J. L. Perkins,** general car foreman at Fort Worth, Tex., succeeds Mr. Mason, and is replaced in turn by **J. T. Lunsford,** general car foreman at Texarkana, Tex.

ENGINEERING & SIGNALING

S. C. Rundell, assistant electrical engineer-line property, of the Chicago, Burlington & Quincy, has been promoted to electrical engineer-line property, with headquarters as before at Chicago, succeeding **H. E. Gannett,** who has resigned.

R. W. Troth, superintendent communications and signals of the St. Louis-San Francisco, has been appointed also to a similar post with the Alabama, Tennessee & Northern (part of the Frisco), with headquarters as before at Springfield, Mo.

PURCHASES & STORES

John F. Duffy has been appointed manager of stores of the Erie at Hornell, N. Y., as announced in the *Railway Age* of June 3. Mr. Duffy was born at Dunmore, Pa., 54 years ago, and joined the Erie as a storehouse foreman in 1914. After serving with the United States Navy in World War I, he returned to the Erie as an inventory clerk at New York,

John F. Duffy

becoming requisition checker at Meadville, Pa., in 1923; assistant chief clerk and statistician for the manager of stores at New York in 1925; chief clerk at New York in 1928, and assistant to purchasing agent at Cleveland, Ohio, in 1939. Mr. Duffy was promoted to assistant manager of stores at Hornell in 1947, which position he held until his recent appointment.

SPECIAL

C. P. King, director of personnel of the St. Louis-San Francisco, has been appointed also director of personnel of the Alabama, Tennessee & Northern (part of the Frisco), with headquarters remaining at St. Louis, Mo.

OBITUARY

Edward A. Carlson, late general storekeeper, Pere Marquette district of the Chesapeake & Ohio, at Grand Rapids, Mich., whose death was reported in the *Railway Age* of May 27, was born on June 25, 1888, in Sweden. He entered railroad service in September, 1906, as a carchecker for the Chicago & North Western at Kaukauna, Wis., and in May, 1923, he left the North Western to become a foreman for the Chicago Steel Company. In April, 1924, he joined the Pere Marquette (now P. M. district, C. & O.) at Saginaw, Mich., as a clerk in the maintenance-of-way department, being advanced to division storekeeper at that point in December, 1924. Mr. Carlson was promoted to general storekeeper at Grand Rapids in November, 1931.

Leo Kupp, general freight agent of the Chesapeake & Ohio, with headquarters at Detroit, Mich., died on June 4. Mr. Kupp was born on June 28, 1895, in Detroit, and began his railroad career in September, 1910, in his native city as a car checker with the Michigan Central. From 1912 to 1919, he served in various clerical capacities at Detroit, and subsequently became assistant general agent there. In 1920 Mr. Kupp left the M.C. to serve as coal agent for Dodge Brothers at Detroit, later being employed as district manager by, successively, the Tri-State Steamship Company and Nicholson Transit Company and the Thompson Transit Company. In June, 1924, he joined the Pere Marquette (now P.M. district, C. & O.) as clerk, and in February, 1946, became assistant general freight agent. He was promoted to general freight agent of the C. & O. at Detroit in October, 1947.

William H. Sagstetter, who retired in June, 1947, as chief mechanical officer of the Denver & Rio Grande Western, with headquarters at Denver, Colo., died in that city on May 12. Born on February 1, 1886, at Wabash, Ind., Mr. Sagstetter attended grade and high school there, and subsequently studied mechanical engineering with the International Correspondence School. Starting his railroad career as a machinist with the Texas & Pacific, he later served on various roads, including the Guatemala Central, the Costa Rica, the Panama, the Pennsylvania, the Cleveland, Cincinnati, Chicago & St. Louis, the Los Angeles & Salt Lake and the Southern Pacific, and from 1907 to 1910, was employed on the Cananea, Yaqui River & Pacific at Empalme, Sonora, Mex. Mr. Sagstetter then joined the Kansas City Southern, with which road he held the successive positions of general foreman and master mechanic at Shreveport, La., and master mechanic at Pittsburg, Kan. He left the K .C. S. in 1920 to become vice-president of the Pittsburg (Kan.) Boiler & Machine Co., and in 1922 joined the Salt Lake Iron & Steel Co. at Salt Lake City, Utah, as president. In April, 1926, he became general foreman on the Wabash at Delray, Mich., and the following May, assistant master mechanic at Montpelier, Ohio, being advanced in 1928 to master mechanic on the same road at Decatur, Ill. He was promoted to assistant superintendent motive power of the Wabash at Decatur in 1932, and in June, 1937, was appointed chief mechanical officer of the Rio Grande, from which post he retired in June, 1947.

Reginald P. Paterson, who retired as freight traffic manager of the Pere Marquette (now P. M. district, Chesapeake & Ohio), with headquarters at Detroit, Mich., in January, 1946, died on June 9, at the age of 75.

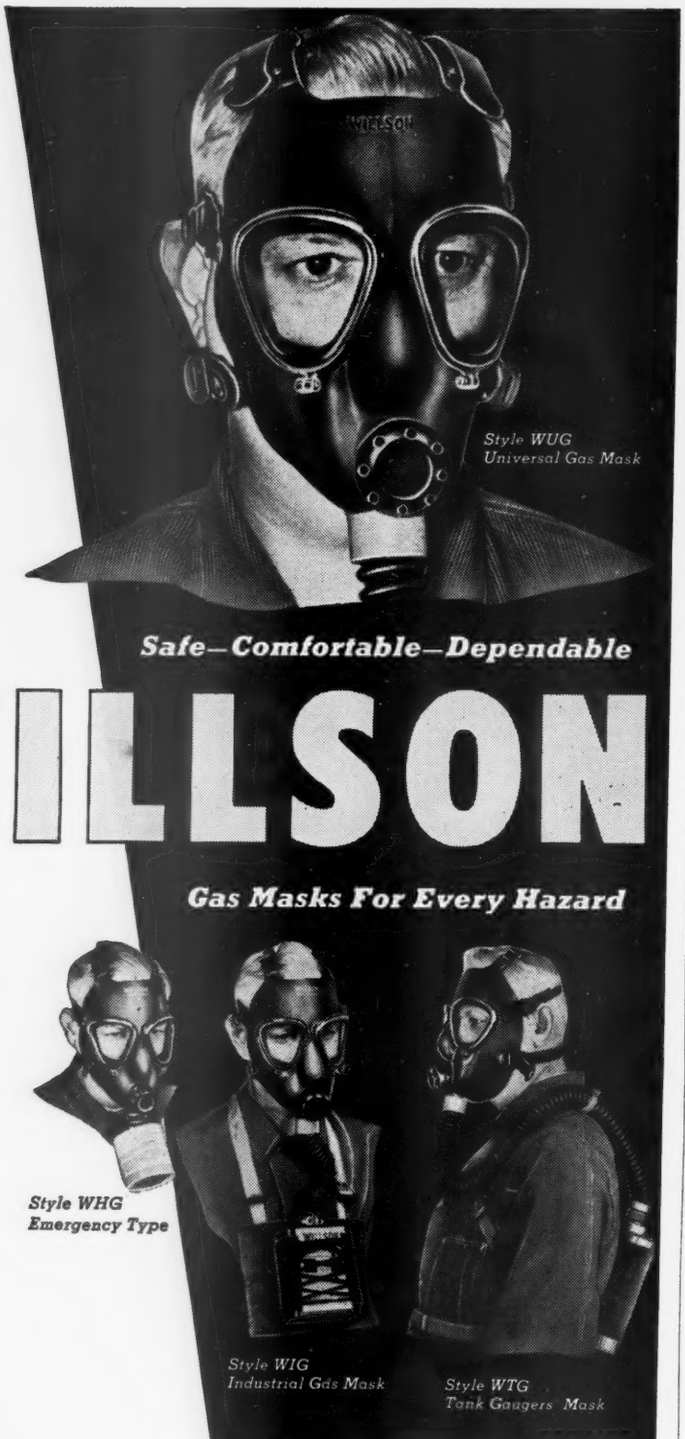
Freight Operating Statistics of Large Steam Railways — Selected

Region	Road and Year	Miles of road operated	Locomotive Miles: Train-miles	Locomotive Miles: Principal and helper	Locomotive Miles: Light	Car Miles: Loaded (*thousands*)	Car Miles: Per cent loaded	Ton-Miles (*thousands*): Gross excl. locos. & tenders	Ton-Miles (*thousands*): Net rev. and non-rev.	Road-locos. on lines: Serviceable Unstored	Road-locos. on lines: Serviceable Stored	Road-locos. on lines: Per Cent B.O.	Road-locos. on lines: Per Cent B.O
New Eng. Region	Boston & Maine 1950	1,701	284,075	293,069	14,509	10,993	67.8	691,569	284,369	90	7	11	10.2
	1949	1,746	302,185	312,990	14,584	11,431	66.3	724,992	284,716	107	8	13	10.2
	N. Y., N. H. & Htfd. 1950	1,772	295,527	296,881	36,390	12,168	67.9	745,424	324,210	115	4	19	13.8
	1949	1,774	285,011	286,401	21,953	11,896	69.4	708,525	307,082	120	13	14	9.5
Great Lakes Region	Delaware & Hudson 1950	794	260,913	315,729	36,392	11,411	68.4	805,828	424,048	144	28	22	11.3
	1949	794	252,577	297,956	34,322	10,602	67.3	727,529	359,443	115	54	26	13.3
	Del., Lack. & Western 1950	965	264,732	287,674	26,774	11,846	69.5	760,472	339,321	79	12	29	24.2
	1949	967	282,820	319,456	33,617	12,350	67.9	802,517	353,327	100	34	9	6.3
	Erie 1950	2,231	600,135	621,219	50,511	32,590	69.9	2,025,521	865,798	161	28	42	18.2
	1949	2,229	594,588	610,660	43,499	31,389	67.5	1,941,071	786,237	182	102	57	16.7
	Grand Trunk Western 1950	971	243,955	253,924	2,619	8,934	67.5	582,481	251,090	60	1	7	10.3
	1949	971	236,580	241,235	1,887	7,941	66.6	501,562	203,566	52	8	9	13.0
	Lehigh Valley 1950	1,239	228,824	239,606	24,009	11,310	69.8	747,591	351,402	59	6	35	35.0
	1949	1,239	241,708	255,464	22,033	11,258	67.9	748,444	344,166	62	19	19	19.0
	New York Central 1950	10,691	3,034,634	3,253,812	225,996	114,074	64.3	8,129,772	3,824,105	1,033	39	372	25.8
	1949	10,689	3,027,408	3,226,277	181,630	103,990	61.0	7,125,129	3,087,192	1,056	143	302	20.1
	New York, Chic. & St. L. 1950	2,162	754,080	782,939	9,150	29,966	66.3	2,091,602	952,036	188	7	70	26.4
	1949	2,162	760,337	778,904	7,561	27,826	65.6	1,867,353	816,791	204	17	43	16.3
	Pitts. & Lake Erie 1950	221	81,007	85,209	70	3,504	74.4	290,248	186,399	33	2	15	30.0
	1949	221	80,041	81,037	70	3,063	66.6	253,117	148,500	25	5	15	33.3
	Wabash 1950	2,381	592,298	601,240	10,066	23,132	69.3	1,442,929	595,504	137	9	60	29.1
	1949	2,381	443,635	452,703	9,939	14,323	66.9	926,500	388,508	155	9	40	19.6
Central Eastern Region	Baltimore & Ohio 1950	6,086	1,754,854	2,133,519	246,008	64,074	64.8	4,670,361	2,294,927	689	65	280	27.1
	1949	6,086	1,663,107	1,997,862	212,857	58,902	63.3	4,253,170	2,014,779	723	93	285	25.9
	Central of New Jersey 1950	410	68,274	70,029	5,090	2,655	65.1	198,837	103,712	39	..	9	18.8
	1949	415	62,539	62,683	4,639	2,502	65.8	179,339	90,003	31	6	9	19.6
	Central of Pennsylvania 1950	212	67,696	78,771	15,378	2,785	68.5	207,037	114,224	34	..	17	33.3
	1949	212	66,025	69,150	7,289	2,371	65.8	170,843	86,440	29	8	15	28.8
	Chicago & Eastern Ill. 1950	906	130,539	131,069	3,107	4,869	69.2	326,385	159,369	22	..	1	4.3
	1949	909	139,718	139,800	3,807	4,889	66.6	318,535	145,648	33	21	9	14.3
	Elgin, Joliet & Eastern 1950	238	97,465	98,444	....	3,516	65.9	273,455	148,704	39	..	1	2.5
	1949	238	99,817	100,675	16	3,625	65.0	279,242	148,445	43	3	..	..
	Pennsylvania System 1950	10,009	2,991,312	3,284,047	379,752	125,833	67.1	8,660,915	4,174,734	1,200	..	459	27.7
	1949	10,039	3,007,329	3,328,810	407,251	120,576	63.3	8,393,134	3,828,407	1,488	160	286	14.8
	Reading 1950	1,315	373,439	394,517	38,328	14,384	68.9	1,097,370	611,416	179	7	42	18.4
	1949	1,323	354,476	370,056	32,385	12,041	59.6	973,380	500,979	180	44	23	9.3
	Western Maryland 1950	837	179,568	222,678	30,382	6,427	65.2	519,348	293,235	151	27	19	9.6
	1949	837	165,997	201,733	25,955	5,858	62.9	472,404	256,387	148	13	15	8.5
Pocahontas Region	Chesapeake & Ohio 1950	5,044	1,481,436	1,611,842	73,581	62,443	59.5	5,234,682	2,909,318	575	23	150	20.1
	1949	5,025	1,184,830	1,262,621	48,594	43,898	58.5	3,615,370	1,800,741	533	83	118	16.1
	Norfolk & Western 1950	2,107	715,803	764,763	59,145	33,632	59.6	2,925,297	1,603,213	264	22	42	12.8
	1949	2,107	624,026	662,491	46,571	26,223	58.8	2,191,758	1,154,686	249	54	22	6.8
Southern Region	Atlantic Coast Line 1950	5,508	886,852	897,732	14,734	25,200	62.9	1,741,525	780,447	315	6	79	19.8
	1949	5,543	970,976	986,751	15,009	25,256	60.3	1,728,785	725,537	333	16	88	20.1
	Central of Georgia 1950	1,783	275,897	284,845	4,927	7,883	71.9	507,241	237,897	102	2	8	7.1
	1949	1,783	294,061	299,440	4,004	7,264	71.6	471,944	220,884	109	..	9	7.6
	Gulf, Mobile & Ohio 1950	2,854	324,232	324,232	290	15,279	73.7	963,280	453,934	61	5	4	5.7
	1949	2,854	329,105	329,105	389	15,717	71.7	1,028,753	487,094	88	19	6	5.3
	Illinois Central 1950	6,543	1,503,197	1,507,388	55,771	54,895	63.6	3,999,006	1,876,656	552	2	103	15.7
	1949	6,552	1,443,878	1,447,284	50,467	49,437	62.0	3,481,481	1,588,318	533	23	89	13.8
	Louisville & Nashville 1950	4,769	1,274,001	1,383,805	37,921	36,302	64.2	2,648,545	1,388,094	361	20	84	18.1
	1949	4,765	1,201,681	1,287,513	30,964	30,566	63.1	2,171,501	1,076,092	358	55	57	12.1
	Nash., Chatt. & St. Louis 1950	1,049	221,615	224,816	5,336	6,813	74.0	426,792	201,553	65	..	3	4.4
	1949	1,051	228,551	232,899	6,827	6,534	72.7	408,557	187,430	73	..	2	2.7
	Seaboard Air Line 1950	4,136	745,974	773,373	6,061	24,963	64.2	1,750,705	765,700	281	17	21	6.6
	1949	4,142	864,056	922,761	15,704	25,310	59.9	1,845,117	789,029	274	..	48	14.9
	Southern 1950	6,320	1,284,893	1,295,427	14,940	40,669	67.5	2,622,842	1,167,167	398	46	163	26.9
	1949	6,382	1,333,251	1,343,093	16,944	38,893	65.0	2,515,231	1,068,833	421	94	135	20.8
Northwestern Region	Chicago & North Western 1950	8,072	824,013	844,359	22,401	29,401	67.2	1,989,105	867,330	273	43	162	33.9
	1949	8,073	991,195	1,043,555	26,773	30,099	62.3	2,123,524	918,020	358	29	92	19.2
	Chicago Great Western 1950	1,445	166,609	166,898	9,405	9,239	67.8	592,910	253,107	34	..	5	12.8
	1949	1,445	184,737	184,838	15,702	8,911	63.9	597,873	251,605	51	..	9	15.0
	Chic., Milw., St. P. & Pac. 1950	10,663	1,219,304	1,278,695	53,700	44,986	67.9	2,987,480	1,357,872	433	55	84	14.7
	1949	10,663	1,386,192	1,456,177	58,536	44,659	63.7	3,083,832	1,364,122	451	60	87	14.5
	Chic., St. P., Minn. & Omaha 1950	1,606	195,052	203,525	9,804	5,368	68.3	356,820	154,463	63	2	44	40.4
	1949	1,606	214,569	224,995	10,472	5,481	66.9	380,094	171,558	79	3	35	29.9
	Duluth, Missabe & Iron Range 1950	562	29,988	30,373	812	419	53.0	31,834	13,896	29	16	9	16.7
	1949	575	47,423	47,610	573	1,443	51.4	130,903	70,658	49	3	4	7.1
	Great Northern 1950	8,221	1,034,203	1,032,901	44,521	35,736	64.7	2,486,575	1,099,323	314	87	55	12.1
	1949	8,222	1,032,397	1,031,582	43,481	37,061	64.6	2,621,032	1,187,546	369	45	62	13.0
	Minneap., St. P. & S. St. M. 1950	4,179	366,970	373,311	6,427	12,194	70.9	763,922	359,347	115	..	14	10.9
	1949	4,179	408,797	422,552	9,276	12,215	66.2	807,453	372,361	122	..	13	9.6
	Northern Pacific 1950	6,593	769,290	803,237	49,524	30,183	71.6	2,041,438	968,487	308	34	71	17.2
	1949	6,593	802,836	844,846	44,052	30,550	69.3	2,095,285	975,251	320	28	59	14.5
Southwestern Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.) 1950	13,073	2,188,564	2,287,502	71,027	95,089	69.5	6,111,382	2,478,828	541	249	105	11.7
	1949	13,103	2,470,597	2,610,457	104,263	92,428	65.9	6,216,301	2,525,384	637	166	133	14.2
	Chic., Burl. & Quincy 1950	8,816	1,132,343	1,155,711	44,245	47,191	67.7	3,139,611	1,427,471	376	39	164	28.3
	1949	8,680	1,161,606	1,176,183	30,116	45,737	64.0	3,146,640	1,395,957	416	49	104	18.3
	Chic., Rock I. & Pac. 1950	7,597	1,067,709	1,090,192	16,400	38,621	64.5	2,547,273	1,097,897	225	47	89	24.7
	1949	7,589	1,177,052	1,220,880	14,613	37,785	61.6	2,577,244	1,091,019	265	39	55	15.3
	Denver & R. G. Wn. 1950	2,413	325,484	353,455	38,905	12,744	71.2	862,082	427,685	113	38	40	20.9
	1949	2,443	362,395	405,634	53,566	12,780	69.3	912,479	452,566	123	34	45	22.3
	Southern Pacific 1950	8,067	1,992,638	2,107,296	301,241	82,910	61.8	5,714,569	2,257,092	699	46	192	20.5
	1949	8,089	1,867,623	2,032,672	306,515	78,183	65.5	5,227,254	2,144,493	722	40	157	17.1
	Union Pacific 1950	9,719	1,983,854	2,065,740	143,876	83,961	67.1	5,795,543	2,421,350	503	135	164	20.4
	1949	9,727	2,147,582	2,227,389	151,028	83,926	63.7	5,922,123	2,568,957	527	100	172	21.5
	Western Pacific 1950	1,192	195,298	199,710	16,003	9,410	77.4	583,591	273,027	41	25	31	32.0
	1949	1,192	215,726	238,416	23,122	9,028	71.9	598,205	281,215	58	46	19	15.4
Central Western Region	International-Gt. Northern* 1950	1,110	189,180	189,910	933	6,140	65.0	443,913	196,665	55	3	8	12.1
	1949	1,110	211,329	212,198	784	5,877	56.6	477,400	215,206	64	4	4	5.6
	Kansas City Southern 1950	886	183,823	185,070	626	8,787	64.6	586,154	252,810	39	4	14	24.6
	1949	886	193,254	195,087	1,946	9,178	63.6	658,827	306,217	46	3	6	10.9
	Mo.-Kans.-Texas Lines 1950	3,241	409,295	417,293	5,194	14,707	66.1	917,164	390,981	98	..	38	27.9
	1949	3,241	524,607	535,205	7,537	16,615	61.1	1,154,178	502,737	111	12	38	23.6
	Missouri Pacific* 1950	6,951	1,251,234	1,270,745	21,895	47,157	66.9	3,101,595	1,366,195	349	15	48	11.7
	1949	6,989	1,321,055	1,359,010	26,095	45,099	64.0	3,089,188	1,314,181	373	41	44	9.6
	Texas & Pacific 1950	1,844	359,211	359,211	17,021	13,489	62.1	932,421	344,483	67	6	3	3.9
	1949	1,852	402,681	402,681	17,423	13,183	58.1	943,544	348,136	111	2	8	6.6
	St. Louis-San Francisco 1950	4,606	697,362	703,842	7,895	23,598	65.2	1,579,749	694,498	204	83	64	18.2
	1949	4,615	775,353	788,525	9,133	22,813	60.6	1,616,809	696,077	256	34	64	18.1
	St. Louis Southw. Lines 1950	1,562	341,984	343,651	5,089	14,687	72.3	867,020	387,570	66	27	13	12.3
	1949	1,562	393,502	395,027	5,369	15,194	69.3	949,105	424,263	82	8	14	13.5
	Texas & New Orleans 1950	4,314	852,531	852,531	32,137	25,993	59.3	1,881,314	759,691	208	3	69	24.6
	1949	4,314	831,799	832,056	21,677	25,415	67.1	1,733,199	756,562	205	2	41	16.5

Items for the Month of March 1950 Compared with March 1949

Region	Road and Year	Freight cars on line: Home	Foreign	Total	Per Cent B.O.	G.t.m.per train-hr. excl.locos. and tenders	G.t.m.per train-mi. excl.locos. and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
New Eng. Region	Boston & Maine....1950	1,764	9,077	10,841	3.4	38,380	2,438	1,003	25.9	834	47.5	5,393	15.8	98.4
	1949	2,475	8,234	10,709	2.8	39,621	2,405	944	24.9	865	52.4	5,260	16.5	90.5
	N. Y., N. H. & Htfd....1950	1,807	18,264	20,071	1.7	35,824	2,528	1,100	26.6	526	29.1	5,902	14.2	86.9
	1949	2,221	15,487	17,708	1.9	36,675	2,494	1,081	25.8	543	30.3	5,584	14.8	70.5
Great Lakes Region	Delaware & Hudson....1950	3,147	7,978	11,125	5.1	50,915	3,101	1,632	37.2	1,340	52.7	17,228	16.5	58.7
	1949	6,720	4,132	10,852	4.5	55,801	2,896	1,431	33.9	1,055	46.3	14,603	19.4	58.1
	Del., Lack. & Western....1950	6,115	10,326	16,441	10.4	43,628	2,920	1,303	28.6	692	34.7	11,343	15.2	94.6
	1949	8,195	8,546	16,741	5.9	44,522	2,877	1,267	28.6	687	35.4	11,787	15.7	88.1
	Erie....1950	10,336	19,025	29,361	7.0	53,859	3,400	1,453	26.6	975	52.6	12,519	16.0	96.6
	1949	12,871	15,461	28,332	7.4	54,632	3,290	1,333	25.0	916	54.1	11,378	16.7	68.1
	Grand Trunk Western....1950	4,262	12,338	16,600	7.5	43,517	2,409	1,039	28.1	549	29.0	8,342	18.2	130.8
	1949	4,995	6,466	11,461	10.3	44,101	2,132	865	25.6	556	32.5	6,763	20.8	121.5
	Lehigh Valley....1950	6,284	10,644	16,928	11.3	62,325	3,313	1,557	31.1	687	31.7	9,149	19.1	91.2
	1949	10,833	8,074	18,907	11.2	58,299	3,149	1,448	30.6	602	29.0	8,961	18.8	90.8
	New York Central....1950	70,500	87,277	157,777	8.7	41,581	2,735	1,286	33.5	806	37.4	11,539	15.5	85.9
	1949	75,488	73,754	149,242	6.1	40,378	2,387	1,034	29.7	665	36.7	9,317	17.2	81.8
	New York, Chic. & St. L....1950	7,080	19,187	26,267	4.6	46,019	2,822	1,284	31.8	1,248	59.2	14,205	16.6	102.7
	1949	10,864	14,934	25,798	2.8	45,807	2,505	1,096	29.4	1,017	52.8	12,187	18.7	103.1
	Pitts. & Lake Erie....1950	5,021	9,543	14,564	19.1	47,975	3,584	2,302	53.2	361	9.1	27,208	13.4	58.4
	1949	7,473	10,028	17,501	6.6	47,722	3,171	1,860	48.5	285	8.8	21,676	15.1	60.0
	Wabash....1950	6,907	12,834	19,741	2.9	50,084	2,460	1,015	25.7	1,010	56.6	8,068	20.6	100.8
	1949	8,648	9,735	18,383	3.2	44,468	2,105	883	27.1	669	36.8	5,264	21.3	76.8
Central Eastern Region	Baltimore & Ohio....1950	43,812	40,808	84,620	15.4	34,273	2,741	1,347	35.8	847	36.5	12,164	12.9	75.9
	1949	63,949	34,366	98,315	9.7	35,765	2,603	1,233	34.2	681	31.4	10,679	14.0	66.5
	Central of New Jersey....1950	859	9,246	10,105	8.5	36,198	2,994	1,562	39.1	368	14.5	8,160	12.4	77.9
	1949	1,004	8,246	9,250	5.6	38,936	2,957	1,484	36.0	301	12.7	6,996	13.6	78.6
	Central of Pennsylvania....1950	1,250	3,908	5,158	15.4	43,313	3,269	1,803	41.0	766	27.3	17,380	14.2	72.8
	1949	2,296	2,928	5,224	9.0	39,265	2,749	1,391	36.5	540	22.5	13,153	15.2	54.3
	Chicago & Eastern Ill....1950	2,217	3,972	6,189	6.8	43,121	2,509	1,225	32.7	817	36.1	5,674	17.2	175.9
	1949	3,330	3,238	6,568	7.2	40,588	2,290	1,047	29.8	730	36.8	5,169	17.8	72.4
	Elgin, Joliet & Eastern....1950	7,573	10,578	18,151	2.1	21,699	2,940	1,599	42.3	279	10.0	20,155	7.7	108.6
	1949	6,920	11,884	18,804	1.6	20,032	2,967	1,577	41.0	255	9.6	20,120	7.2	99.1
	Pennsylvania System....1950	106,485	103,202	209,687	16.6	42,780	3,000	1,446	33.2	651	29.2	13,455	14.8	77.1
	1949	150,612	87,485	238,097	8.7	41,513	2,870	1,309	31.8	524	26.0	12,302	14.9	68.0
	Reading....1950	14,193	17,619	31,812	8.7	35,660	2,943	1,640	42.5	642	21.9	14,999	12.1	70.6
	1949	17,213	16,356	33,569	5.5	36,094	2,749	1,415	41.6	480	19.4	12,215	13.1	62.8
	Western Maryland....1950	4,431	3,590	8,021	1.0	38,882	2,984	1,685	45.6	1,029	34.6	11,301	13.4	46.4
	1949	7,386	3,267	10,653	1.2	40,082	2,890	1,569	43.8	803	29.2	9,881	14.1	45.7
Pocahontas Region	Chesapeake & Ohio....1950	47,488	25,864	73,352	7.1	56,466	3,584	1,992	46.6	1,158	41.4	18,606	16.0	78.9
	1949	69,108	20,840	89,948	2.4	50,980	3,075	1,532	41.0	681	28.4	11,560	16.7	62.4
	Norfolk & Western....1950	26,435	7,120	33,555	2.6	63,332	4,167	2,284	47.7	1,235	43.5	24,545	15.5	87.3
	1949	44,084	5,938	50,022	5.0	59,055	3,558	1,875	44.0	796	30.7	17,678	16.8	76.4
Southern Region	Atlantic Coast Line....1950	13,952	16,521	30,473	5.1	30,725	1,971	883	31.0	832	42.7	4,571	15.6	79.6
	1949	12,446	15,612	28,058	5.2	29,681	1,785	749	28.7	834	48.2	4,222	16.7	78.4
	Central of Georgia....1950	3,144	5,765	8,909	8.6	32,075	1,843	864	30.2	868	40.0	4,304	17.4	90.1
	1949	3,506	4,901	8,407	7.5	29,199	1,609	753	30.4	856	39.3	3,996	18.2	93.8
	Gulf, Mobile & Ohio....1950	3,916	10,090	14,006	2.9	49,407	2,981	1,405	29.7	1,055	48.2	5,131	20.0	159.0
	1949	4,354	9,892	14,246	2.2	59,986	3,133	1,483	31.0	1,122	50.5	5,506	19.2	98.6
	Illinois Central....1950	21,735	29,434	51,169	1.8	44,856	2,692	1,263	34.2	1,141	52.5	9,252	16.9	82.6
	1949	27,222	25,655	52,877	2.2	44,650	2,443	1,114	32.1	973	48.9	7,820	18.5	79.5
	Louisville & Nashville....1950	32,315	15,159	47,474	10.6	32,269	2,086	1,093	38.2	878	35.8	9,389	15.5	103.1
	1949	44,570	12,691	57,261	2.9	29,506	1,813	898	35.2	634	28.5	7,285	16.3	95.3
	Nash., Chatt. & St. Louis....1950	2,610	5,212	7,822	10.0	37,441	1,935	914	29.6	851	38.9	6,198	19.4	120.1
	1949	2,459	4,320	6,779	10.5	35,713	1,795	824	28.7	941	45.1	5,753	20.0	109.4
	Seaboard Air Line....1950	10,954	14,974	25,928	2.3	39,887	2,405	1,052	30.7	988	50.2	5,972	17.0	91.8
	1949	11,003	13,238	24,241	1.4	37,695	2,202	942	31.2	1,069	57.3	6,145	17.7	104.6
	Southern....1950	17,701	28,621	46,322	3.9	34,674	2,062	918	28.7	809	41.8	5,957	17.0	73.3
	1949	17,982	28,449	46,431	5.4	33,436	1,899	807	27.5	737	41.3	5,403	17.7	73.1
Northwestern Region	Chicago & North Western....1950	20,161	34,607	54,768	2.9	38,140	2,512	1,095	29.5	534	26.9	3,466	15.8	64.7
	1949	22,317	23,143	45,460	2.7	33,523	2,267	980	30.5	619	32.6	3,668	15.6	79.2
	Chicago Great Western....1950	1,566	5,571	7,137	2.9	63,542	3,567	1,523	27.4	1,145	61.6	5,650	17.9	141.0
	1949	2,063	4,775	6,838	5.5	51,737	3,236	1,362	28.2	1,149	63.7	5,617	16.0	110.9
	Chic., Milw., St. P. & Pac....1950	29,146	33,481	62,627	2.4	37,713	2,479	1,127	30.2	698	34.0	4,108	15.4	80.4
	1949	31,415	27,370	58,785	1.4	35,850	2,240	991	30.5	724	37.2	4,127	16.1	87.7
	Chic., St. P., Minn. & Omaha..1950	1,068	8,152	9,220	2.2	25,226	1,891	819	28.8	563	28.6	3,103	13.8	69.7
	1949	1,146	5,689	6,835	3.5	25,222	1,856	838	31.3	727	34.7	3,446	14.2	72.3
	Duluth, Missabe & Iron Range..1950	14,699	408	15,107	2.3	15,544	1,144	499	33.2	30	1.7	798	14.6	21.6
	1949	14,888	420	15,308	3.1	41,333	2,874	1,551	49.0	146	5.8	3,964	15.0	35.1
	Great Northern....1950	24,089	18,974	43,063	3.0	39,695	2,418	1,069	30.8	788	39.6	4,314	16.5	82.6
	1949	25,347	16,502	41,849	3.2	39,944	2,555	1,158	32.0	901	43.5	4,659	15.7	82.3
	Minneap., St. P. & S. St. M....1950	6,310	7,796	14,106	5.9	37,274	2,097	987	29.5	814	39.0	2,774	17.9	109.1
	1949	6,611	7,125	13,736	6.4	34,944	1,993	919	30.5	821	40.7	2,874	17.7	112.6
	Northern Pacific....1950	17,939	12,866	30,805	7.2	45,469	2,680	1,271	32.1	985	42.9	4,739	17.1	72.3
	1949	20,573	14,884	35,457	7.0	44,537	2,622	1,220	32.0	883	39.9	4,772	17.1	75.9
Southwestern Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)..1950	44,375	25,299	69,674	5.0	57,210	2,804	1,137	26.1	1,134	62.6	6,117	20.5	90.7
	1949	49,584	27,749	77,333	4.8	51,510	2,526	1,026	27.3	1,070	59.4	6,217	20.5	98.2
	Chic., Burl. & Quincy....1950	16,820	25,055	41,875	4.2	52,315	2,784	1,266	30.2	1,120	54.7	5,223	18.9	70.4
	1949	19,058	21,717	40,775	3.3	49,959	2,718	1,206	30.5	1,038	53.2	5,188	18.4	74.9
	Chic., Rock I. & Pac....1950	11,354	24,689	36,043	4.5	43,526	2,393	1,032	28.4	997	54.4	4,662	18.2	105.1
	1949	12,820	21,504	34,324	3.7	40,613	2,198	930	28.9	1,012	56.9	4,638	18.5	113.9
	Denver & R. G. Wn....1950	9,202	6,222	15,424	4.9	44,460	2,664	1,322	33.6	899	37.6	5,717	16.8	69.0
	1949	8,395	5,906	14,301	4.6	41,332	2,539	1,259	35.4	928	37.8	5,976	16.4	76.2
	Southern Pacific....1950	28,165	43,774	71,939	3.5	49,843	2,906	1,148	27.2	1,069	63.6	9,026	17.4	88.5
	1949	27,616	34,697	62,313	4.6	45,712	2,822	1,158	27.4	1,122	62.5	8,552	16.3	87.6
	Union Pacific....1950	26,141	31,025	57,166	3.4	65,107	2,953	1,234	28.8	1,382	71.4	8,037	22.3	91.5
	1949	29,701	30,910	60,611	3.4	57,810	2,784	1,208	30.6	1,319	67.6	8,520	21.0	100.5
	Western Pacific....1950	1,886	2,792	4,678	15.0	67,280	2,999	1,403	29.0	1,841	82.0	7,389	22.5	75.9
	1949	2,284	2,210	4,494	9.8	57,781	2,791	1,312	31.1	1,938	86.6	7,610	20.8	70.3
Central Western Region	International-Gt. Northern*....1950	1,065	6,847	7,912	2.0	47,095	2,368	1,049	32.0	794	38.2	5,715	20.1	106.9
	1949	920	6,508	7,428	.9	43,204	2,283	1,029	36.6	918	44.3	6,254	19.1	101.1
	Kansas City Southern....1950	1,347	5,812	7,159	4.8	52,973	3,219	1,388	28.8	1,169	62.9	9,204	19.7	114.2
	1949	1,701	5,887	7,588	5.0	67,593	3,429	1,594	33.4	1,281	60.4	11,149	19.8	125.6
	Mo.-Kans.-Texas Lines....1950	3,816	8,369	12,185	4.5	42,979	2,250	959	26.6	1,031	58.7	3,891	19.2	106.7
	1949	4,429	6,379	10,808	1.9	41,529	2,218	966	30.3	1,505	81.4	5,004	18.9	117.7
	Missouri Pacific*....1950	18,887	18,817	37,704	2.1	48,902	2,490	1,097	29.0	1,176	60.6	6,340	19.7	106.3
	1949	17,935	17,575	35,510	2.0	46,418	2,350	1,000	29.1	1,194	64.0	6,066	19.8	102.9
	Texas & Pacific....1950	2,247	6,464	8,711	5.7	54,858	2,598	960	25.5	1,220	76.9	6,026	21.1	170.3
	1949	2,598	5,924	8,522	4.4	49,356	2,351	867	26.4	1,314	85.6	6,064	21.1	119.1
	St. Louis-San Francisco....1950	9,558	13,426	22,984	3.2	39,257	2,272	999	29.4	963	50.1	4,864	17.3	72.8
	1949	11,606	11,833	23,439	2.7	40,321	2,095	902	30.5	983	53.2	4,865	19.3	79.0
	St. Louis Southw. Lines....1950	1,516	4,848	6,364	1.8	51,728	2,539	1,135	26.4	2,059	107.9	8,004	20.4	114.5
	1949	2,000	4,874	6,874	2.0	46,628	2,418	1,081	27.9	1,934	100.0	8,762	19.3	131.8
	Texas & New Orleans....1950	5,084	15,607	20,691	4.4	42,775	2,229	900	29.2	1,131	65.2	5,681	19.4	108.2
	1949	4,890	16,653	21,543	2.4	40,748	2,104	919	29.8	1,147	57.4	5,657	19.6	116.6

* Report of trustee or trustees.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.



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CURRENT PUBLICATIONS

BOOKS

1950 Industrial Management Symposium. 163 pages. Published by Consolidated Reporting Company, 303 Fourth ave., New York 10. $3.75.

Contains reprints of articles appearing in magazines and addresses made before various associations on labor-management relations, pensions, industrial relations, training, etc.

Some Classic Locomotives, by Hamilton Ellis. 173 pages, illustrations. Published by George Allen & Unwin, Ltd., Museum st., London, England. Available in this country from Macmillan Company, 60 Fifth ave., New York 11. $4.50.

This book is not intended to be a comprehensive history of the locomotive; it is rather a series of intimate essays, some on well-known types and others on famous families of locomotives. The illustrations, reproduced from photographs and from the author's paintings, are chiefly of English and Scottish types, but they range in their subjects from ancient French Cramptons to the famous "Georges" and "Directors," Stroudley "D Tanks," the Great Western "Stars," Highland "Castles" and the immense Beyer-Garratts of Africa.

The Modern World Book of Railways, by Paul Townsend. 160 pages, illustrations. Published by Sampson Low, Marston & Co., 25 Gilbert st., London W. 1, England. Available in this country from Macdonald & Co., 37 Madison ave., New York 10. $2.25.

While the emphasis is fundamentally on British railways, and more especially on railway employees, the contents of this volume are wide in range, and cover such diversified subjects as history and development of railways, the working of a locomotive, building track, the London underground railway, railways in wartime, station design, and locomotive shops.

PAMPHLETS

The Red Electrics of Portland, Oregon. 24 pages, illustrations, maps, drawings. Published by Interurbans, 1414 S. Westmoreland ave., Los Angeles 6, Cal. $1.

Portland, Ore., once had a large and complete network of surburban electric railways. Deluxe interurban trains of the Oregon Electric, complete with sleepers, buffets and observations sped 125 mi. to Eugene; heavy cars of the Portland Railway Light & Power Co. rumbled up the Mt. Hood watershed to Bull Run and Cazadero; United Railways made its tortuous way over the Linnton hills through evergreen forests to North Plains; and then there was the Southern Pacific "Red Electric" which perhaps was the best of them all. Intended originally to be a vast amalgamation of all S.P. lines in the Willamette valley, with the single exception of the main line to San Francisco, the Portland, Eugene & Eastern (as the Red Electric was originally titled) actually resulted in a far smaller operation. Nevertheless, its cars were

the finest interurbans in the entire Pacific Northwest and its method of operation was that of the parent steam railroad. Changing times brought about the comparatively early abandonment of the Red Electric. Continuing its series of special issues devoted to important western interurbans of yesteryear, "Interurbans" presents, in this, its Special No. 8, the story of the S.P. Red Electric—its history, operation and abandonment. Included is a roster of equipment, complete to the final disposition of cars after the system was abandoned, and a cross-section and elevation drawing of one of the single-end combination baggage and passenger motor coaches.

U. S. Steel's Policies on Costs, Prices, Plants, Productivity. 64 pages, illustrations. Published by the United States Steel Corporation. Copies available on request from J. Carlisle MacDonald, assistant to chairman, U. S. Steel Corporation, 71 Broadway, New York 6.

This booklet includes reprints of testimony presented last January to the Joint Committee on the Economic Report by Benjamin F. Fairless, president, E. M. Voorhees, finance committee chairman, and other officials of the U. S. Steel Corporation. "It is our sincere hope," the foreword reads, "that this presentation of the statements so presented to the committee will clarify our position that increased costs of operation justify increased prices to cover such higher costs, and that stockholders, as well as employees, are entitled to consideration when deteminations are made as to how U. S. Steel is to be operated."

Socialism in America, 1950. A Study by the Committee on Economic Policy of the Chamber of Commerce of the United States. 74 pages. Published by the Economic Research Department, Chamber of Commerce of the United States, Washington 6, D. C. Single copies, 50 cents.

Many people feel that even though we do not have an active socialist party of large dimensions in the United States, the country is nevertheless moving in the direction of a collectivist economy. Observers differ as to the character and nature of this trend. Some may mistake mere change for socialism. This study analyzes these changes and trends in terms of their effect on the free market which is the heart of a free society. Recent British experience is also appraised and some suggestions are made as to what we can do to preserve our freedom and economic progress.

Bulletin No. 79 of the Railway & Locomotive Historical Society, Inc. 80 pages, illustrations. Published by the R. & L. H. S., Baker Library, Harvard Business School, Boston, Mass. Price, to members, $1; to non-members, $2.

This entire bulletin is devoted to an extensive and thorough treatise on Norris locomotives, by P. C. Dewhurst, an English engineer who took great care to authenticate the material in the paper, which, in part, was first read before the Newcomen Society in London in 1947. The compilation includes all known sources of printed material relating to the Norris locomotive build-

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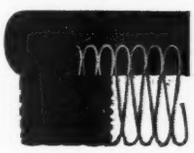

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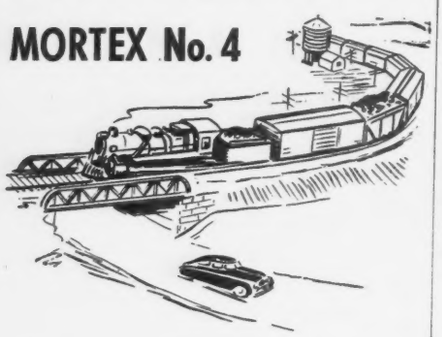

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ing industry in Philadelphia, and treats exhaustively of early attempts at building more powerful locomotives than those then in use. The author's rationalizing of a number of obscure points relative to type of construction and power of early Norris locomotives is well-presented.

British Railways Welcome You. 47 pages, illustrations. Published by the Railway Executive, 222 Marylebone rd., London, N.W.1, England.

All new employees of British Railways will in future be given this booklet explaining the organization of the industry and the obligations and opportunities of its staff. It opens with a personal message of welcome from Sir Eustace Missenden, chairman of the Railway Executive. Brief chapters follow on policy, organization, contact with the public, opportunities, conditions of service, and welfare arrangements.

Railroading in France. 52 pages, illustrations, map. Available from the French National Railroads, 610 Fifth ave., New York 20. Free.

The 1950 edition of this brochure offers current and timely information on travel, and is expressly designed for the traveler using the railroads and related services in France. There are descriptions of the various types of trains and cars, day and night accommodations, seat reservations and baggage formalities, as well as a supplementary French and corresponding English vocabulary for the traveler and student.

Metropolitan New York Transportation Telephone Tickler for Traffic Executives. 160 pages. Published by the Journal of Commerce, 63 Park row, New York 15. 50 cents.

Designed for traffic executives who need information quickly about routing, rates, arrivals, departures, clearances or expediting, this annual directory includes alphabetical listing of names, addresses and telephone numbers of more than 1,000 steamship lines, railroads, airlines, foreign freight forwarders, warehouses and trucking companies with custom house licenses. It also shows company personnel by names, titles and phone numbers. Features of the tickler are a cross-index of subsidiary and foreign ship lines to ship operators and general agents in New York, and the names, addresses and telephone numbers of consular offices in the city.

Transportation, Volume 3, 1949. 40 pages, illustrations, maps. Published by the Connecticut Valley Chapter, National Railway Historical Society, Inc., and Connecticut Valley division, Electric Railroaders' Association, Inc., Warehouse Point, Conn. Subscription, $1 per year postpaid.

This 1949 volume of "Transportation" contains articles on the Calais, Me., street railway; the moving of a large double-truck trolley car by auto-truck and trailer over public highways by the Connecticut Electric Railway Association; the annual report for 1948 of the C.E.R.A.; the Conway, Mass., electric street railway; and the Dover, Somersworth & Rochester street railway, which operated between those three communities in New Hampshire.

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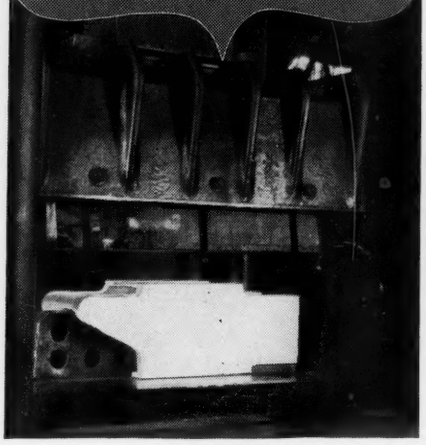

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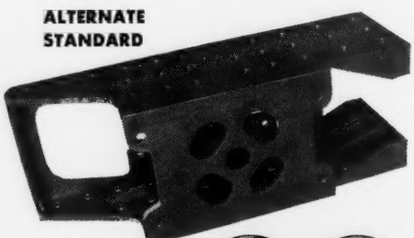

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